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UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
WASHINGTON, D. C.
H. H. BENNETT, CHIEF

HYDROLOGIC STUDIES

COMPILATION OF
RAINFALL AND RUN-OFF FROM THE WATERSHEDS
OF THE MISSOURI VALLEY LOESS REGION
CONSERVATION EXPERIMENT STATION

CLARINDA, IOWA

1934-38

31

Office of Research
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UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
Washington, D. C.
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CONSERVATION EXPERIMENT STATION
CLARINDA, IOWA

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by

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Prepared under the direction of
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FIGURES

1	Map of the conservation experiment station
2	Map of watersheds V, W, X, Y, and Z

REPORT ON HYDROLOGIC INVESTIGATIONS ON SMALL WATERSHEDS
AT THE CONSERVATION EXPERIMENT STATION, MISSOURI VALLEY
LOESS REGION, CLARINDA, IOWA.

I. The Experiment Station History

The Soil and Water Conservation Experiment Station at Clarinda, Iowa, was established in March, 1931. The Division of Agricultural Engineering in the Bureau of Public Roads, and the Bureau of Chemistry and Soils were given responsibility for the inauguration of the work. The Iowa Agricultural Experiment Station cooperated in selection of location of the station and also leased the land. The Chambers of Commerce of Clarinda, Iowa, and Shenandoah, Iowa, and the Page County Farm Bureau cooperated by assuming responsibility for the payment of the taxes on the farm. This project was later transferred to the Soil Conservation Service on April 1, 1935.

Acknowledgment is made to R. A. Norton, the present Project Supervisor, who installed the equipment and collected the early basic records. During the early period of the station the project was supervised by G. W. Musgrave. Recent records were collected by L. H. Schoenleber, who directed three men furnished by the Works Progress Administration, for the routine compilations of the data for this report. L. L. Harrold and W. D. Potter of the Washington Office, Hydrologic Division, prepared the instructions for compiling the data, initiated the compilation work in the field and reviewed the data before publication.

II. Physical Characteristics of the Station

This farm, consisting of 200 acres, is situated about midway between the towns of Shenandoah and Clarinda, on State Highway No. 3, in Page County, Iowa. It was selected as being representative of the loessial soils of rolling topography in the Missouri River Valley. The average relief is from 40 to 70 feet. The greater part of the farm consists of Marshall silt loam, which is the predominant soil type of the problem area. Areas of the different soil types are shown in figure 1.

III. Description and History of Each Watershed

Soon after the station was established there were seventeen different engineering experiments inaugurated. One of the experiments set up at this station was to determine the effect of land use on surface run-off and soil loss from small watersheds and terraced fields. There are five different watersheds included in this study (see figure 2), namely Plot V, Plot W, Plot X, Plot Y, and Plot Z. The location of these plots on the Experiment Station is shown in figure 1.

Watershed Plot V, good rotation untterraced plot, was installed in September, 1931. The measuring equipment was completely installed by October, 1932, at which time hydrologic measurements were started. The drainage area of this watershed is confined by the use of earth ridges and dykes. In general the

drainage of this plot results from sheet flow into a natural depression and is then carried off the plot through confined channel. This watershed, 3.25 acres in area, is untterraced, sloping generally to the northeast. A view of Plot V is shown in Plates I and II. There is a crop rotation of corn, corn, oats with seeding of clover and clover. The rotation started with second year corn in 1932.

Watershed Plot W, poor rotation untterraced plot, was installed in September, 1931. The measuring equipment was completely installed by April, 1934, at which time hydrologic measurements were started. The drainage area of this watershed is confined by the use of earth ridges and dykes. In general the drainage of this plot results from sheet flow into natural depression and is then carried off the plot through confined channel. This watershed, 1.97 acres in area, is untterraced, sloping generally to the southeast. A view of Plot W is shown in Plate III. The crop rotation on this area is corn, corn, corn, oats. The rotation started with oats in 1934.

Watershed Plot X, poor rotation terraced plot, was installed in September, 1931. The terraces were constructed September 8 to 12, 1931. Terraces on this watershed possess the following characteristics.

Terrace	Length feet	Vertical Interval feet	Drainage Area Acres	Uniform grade in./100 ft. inches	Slope of land per 100 ft. feet
X-1	127	4.81	0.19	3	6.65
X-2	169	5.23	.19	3	9.12
X-3	226	4.97	.23	3	9.67
X-4	324	5.03	.38	3	8.41
X-5	350	4.83	.39	3	9.64
X-6	292	5.19	.40	3	9.61
Other			<u>.19</u>		
TOTAL			1.97		

The measuring equipment was completely installed by April, 1934, at which time hydrologic measurements were started. Surface drainage resulting from terraces on this plot is concentrated into a terrace outlet and is then diverted to the measuring equipment. This plot sloping generally to the northeast has a crop rotation of corn, corn, oats. The rotation started with oats in 1934. A view of Plot X is shown in Plate IV.

Watershed Plot Y, good rotation untterraced plot, was installed in September, 1931. The measuring equipment was completely installed by October, 1932, at which time hydrologic measurements were started. On February 17 to 24, 1934, the east boundary was altered so that the area of this plot was the same as Plot V. The drainage area of this watershed is confined by the use of earth ridges and dykes. In general the drainage of

this plot results from sheet flow into a natural depression and is then carried off of the plot through confined channel. The watershed, 3.25 acres in area, is unterraced sloping generally to the southeast. A view of Plot Y is shown in Plate V. There is a crop rotation of corn, corn, oats with seeding of clover and clover. The rotation started with second year corn in 1932.

Watershed Plot Z, good rotation terraced plot, was installed in September, 1931. The terraces were constructed September 11 and 12, 1931. Terraces on the watershed possess the following characteristics.

Terrace	Length Feet	Vertical Interval Feet	Drainage Area Acres	Uniform Grade in./100 ft. Inches	Slope of land per 100 feet Feet
Z-1	576	4.05	0.52	3	10.05
Z-2	566	5.05	.69	3	9.61
Z-3	528	5.16	.60	3	10.75
Z-4	500	4.78	.59	3	9.54
Z-5	430	5.01	.53	3	10.06
Other			<u>.19</u>		
Total			3.12		

The measuring equipment was completely installed by October, 1932, at which time hydrologic measurements were started. On February 17-24, 1934, the northeast boundary was altered so that the area of this plot, including terraces Z-1, Z-2, Z-3, Z-4, and Z-5, was .

nearly the same size as Plot V and Plot Y. Surface drainage resulting from terraces on this plot is concentrated into a terrace outlet and is then diverted to the measuring equipment. This plot sloping generally to the northeast has a crop rotation of corn, corn, oats with a seeding of clover and clover. The rotation on this area of 3.12 acres started with second year corn in 1932. A view of Plot Z is shown in Plate VI.

IV. Instrumentation.

Rain Gages. The rain gages used at this station are Friez weighing and recording rain and snow gage or Standard Weather Bureau rain gage. Charts on the Friez type gage are changed once a week and after each storm. Table 1 shows date the rain gages were installed and other characteristics relative to their installation and operation. The location of each rain gage on this farm is shown in figure 1. The area of each watershed over which the records from each standard Weather Bureau rain gage applies is shown in table 2. The area of each watershed over which the records from each weighing and recording rain gage applies is shown in table 3.

Flumes and Silt Samplers. Equipment used to measure soil and water losses for all plots consists of the following: Parshall measuring flume, water level recorders, wooden silt box and Ramser silt sampler with a side tank to hold sample of runoff.

Pictures of measuring equipment for Plots V, W, X, Y, and Z are shown in Plates VII, VIII, IX, X, and XI, respectively. Table 4 shows kind and date of installation of measuring equipment. After run-off has occurred from any one plot the charts are removed from the water-stage recorders and replaced with new charts. A record is made of the amount of runoff in the silt box and a representative sample is taken to the laboratory. All run-off which is saved in the side tank during the period of run-off is removed, weighed and a representative sample is taken to the laboratory where the number of pounds of soil are determined per cubic foot of sample. Total run-off is determined from the hydrograph or from the amount left in the silt box and side tank, provided there is no hydrograph. The total soil loss can be determined by applying the sample factor, (pounds of soil per cubic foot of run-off) to the figure of total run-off. The total pounds of soil loss is then converted into tons of soil loss per acre.

V. Graph and Tabulation Sheets

All storms where the total rainfall was 0.20 inches or more were recorded on Form SCS-345 for the years 1934 to 1938, inclusive. Graph sheets were prepared showing rainfall intensities and accumulated rainfall for all storms where a hydrograph was obtained from one or more watersheds. Recording rain gage charts were reproduced on the graph sheets using the record most nearly representative of the precipitation on the watershed under

Table 1. WATERSHED INSTRUMENTATION
Rain Gages

Gage No.	Type	Date of Installation	Scale 1" on Chart Equals		Dist. to Nearest Obstacle (ft.)	Height of Obstacle above top of Rain gage. (ft.)	Remarks
			Time (min.)	Rainfall Depth (in.)			
Plum Creek #2	Fergusson	Nov. 1931	62.7	0.67	75	5	Wire fence
Plum Creek #2	Standard	Nov. 1931	—	—	do	do	do
Tarkio Creek #1	Fergusson	Nov. 1931	62.7	.67	5	4	Wire fence
Tarkio Creek #1	Standard	Nov. 1931	—	—	do	do	do
Tarkio Creek #2	Fergusson	June 1931	62.7	.67	25	5	Clock box
Tarkio Creek #2	Standard	June 1931	—	—	do	do	do
Tarkio Creek #5	Standard	Jan. 1937	—	—	30	4	2" x 4" terrace marker
Tarkio Creek #7	Standard	Jan. 1937	—	—	25	4	Wire fence
Tarkio Creek #8	Standard	Jan. 1937	—	—	35	4	2" x 4" terrace marker

Table 2. PERCENT OF EACH WATERSHED AREA SERVED BY THE
NON-RECORDING RAIN GAGES

Clarinda, Iowa 1934-1935-1936						
Watershed Plot	: Plum : Creek #2	: Tarkio : Creek #1	: Tarkio : Creek #2	: Tarkio : Creek #5	: Tarkio : Creek #7	: Tarkio : Creek #8
V	:	:	: 100.0	:	:	:
W	:	:	: 100.0	:	:	:
X	:	: 2.1	: 97.9	:	:	:
Y	: 61.1	: 15.3	: 23.6	:	:	:
Z	: 53.6	: 46.4	:	:	:	:

1937-1938						
V	:	:	: 66.80	: 1.41	: 31.79	:
W	:	:	: 24.73	: 75.27	:	:
X	:	:	:	: 100.00	:	:
Y	: 5.46	:	:	: 94.54	:	:
Z	: 1.75	: 0.26	:	: 4.12	:	: 92.86

TABLE 3.- PERCENT OF EACH WATERSHED AREA SERVED
BY THE RECORDING RAIN GAGES

Clarinda, Iowa

1934-1935-1936

Watershed	:	:	:	:
Plot	:	Plum Creek #2	:	Tarkio Creek #1 : Tarkio Creek #2
V	:	:	:	100.00
W	:	:	:	100.00
X	:	:	:	100.00
Y	:	70.32	:	29.68
Z	:	100.00	:	

1937-1938

V	:	:	:	100.00
W	:	:	:	100.00
X	:	:	0.94	99.06
Y	:	60.26	14.76	24.98
Z	:	54.24	45.76	

consideration. Rainfall intensities were determined from increments of rainfall for time periods during which the gage chart showed constant slope, i.e., between break points on the recorded graph of accumulated rainfall. The total amount of rainfall for each watershed was computed from a mean of standard gage measurements weighted in accordance with the Horton-Thiessen method. The percentage of each rain gage reading applicable to each watershed is shown in tables 2 and 3.

Parshall rating table was used in converting stage in the flume to rates of run-off in cubic feet per second. The minimum value of stage covered by the published table was 0.01 foot. The rate of run-off curves (hydrographs) was computed by applying the discharge rating table to the stage heights where a change of slope occurred on the water-stage chart and at intermediate points. The accumulated surface-run-off graph was derived from the hydrograph by averaging ordinates on the rate-time graph and multiplying them by the time interval between ordinates.

VI. Published Reports Relative to Watersheds Plots V, W, X, Y, and Z.

Soil and Water Conservation Investigations at the Soil Conservation Experiment Station, Missouri Valley Loess Region, Clarinda, Iowa. Progress Report 1931-35 - by G. W. Musgrave and R. A. Norton. U. S. D. A. Technical Bulletin 558 - February, 1937.

Investigations in Soil and Water Conservation, Soil Conservation Experiment Station, Missouri Valley Loess Region, Clarinda, Iowa. - by R. A. Norton, O. R. Neal and L. H. Schoenleber - year, 1936.

Investigations in Soil and Water Conservation, Soil Conservation Experiment Station, Missouri Valley Loess Region, Clarinda, Iowa - by R. A. Norton, O. R. Neal and L. H. Schoenleber - year, 1938.

Table 4. WATERSHED INSTRUMENTATION
Flumes and Silt Samplers

Missouri Valley Loess Region
Clarinda, Iowa

Water- shed	Parshall flume		Make and type	Maxi- mum range	Scales: Smallest division equals		Rammer silt sampler Capacity of silt box	Date of installation	Frequency of field checks		Remarks
	Size	Maxi- mum depth			Time	Cage height			Zero on gage	Settlement dimensions	
	feet	inches		inches	minutes	feet	cubic feet				
Plot V	2	40	Bristol, Pressure Friez, FW-1	36 40	5 10	0.025 .02	859	Oct., 1932 Aug. 24, 1938	Weekly	Yearly	Yearly
Plot W	do	28	Bristol, Pressure Friez, FW-1	36 30	5 10	.025 .02	586	April, 1934 Aug. 23, 1938	do	do	do
Plot X	do	22	Bristol, Pressure Friez, FW-1	18 24	5 10	.02 .02	450	April, 1934 Sept. 30, 1938	do	do	do
Plot Y	do	40	Bristol, Pressure Friez, FW-1	36 40	5 10	.025 .02	1120	Oct., 1932 Aug. 8, 1938	do	do	do
Plot Z	do	40	Bristol, Pressure Friez, FW-1	36 40	5 10	.025 .02	586	Oct., 1932 Aug. 10, 1938	do	do	do

Galvanized iron

There are two recorders installed at each flume.



Plate I. Southeast portion of plot V showing location of measuring equipment.

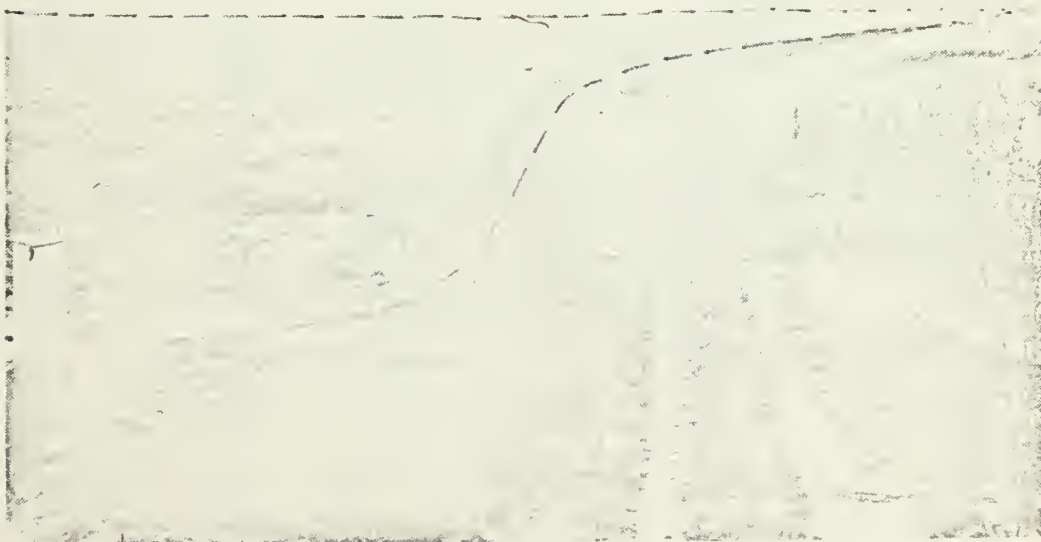


Plate II. Northwest portion of plot V showing location of measuring equipment.



Plate III. Plot W showing location of measuring equipment.

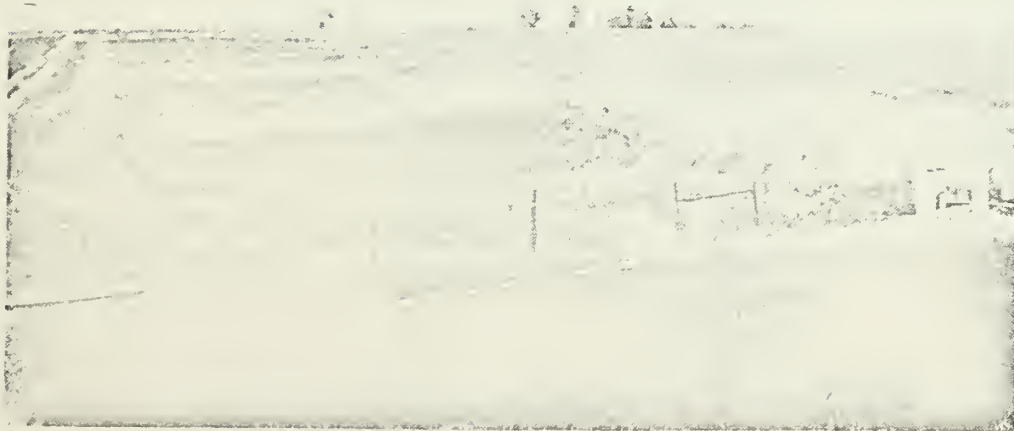


Plate IV. Plot X showing location of X terraces and measuring equipment.



Plate V. Plot Y showing boundary location.



Plate VI. Plot Z showing location of Z terraces.



Plate VII. Measuring equipment installed at plot V.



Plate VIII. Measuring equipment installed at plot W.



Plate IX. Measuring equipment installed at plot X.

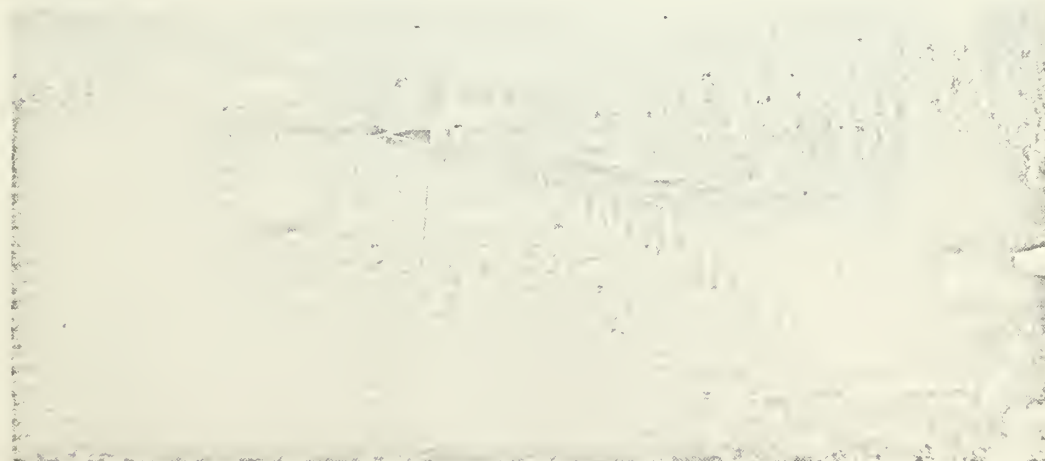
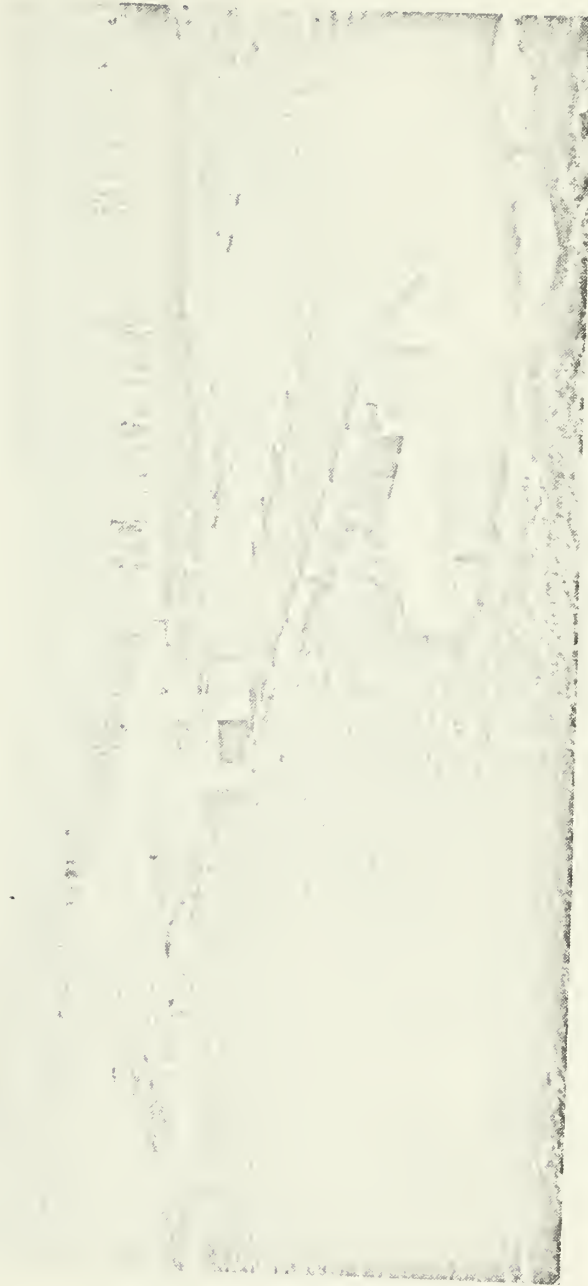


Plate X. Measuring equipment installed at plot Y.



Plot XI. Measuring equipment installed at plot Z.

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UNITED STATES DEPARTMENT OF AGRICULTURE
 SOIL CONSERVATION SERVICE
 DIVISION OF RESEARCH

MONTH April, May, June, 1934

SHEET 1 OF 5 SHEETS

RECORD OF SINGLE STORMS AND THEIR RUN-OFFS ON VARIOUS WATERSHEDS

PROJECT Clarinda, Iowa

S. S. MURPHY, PROJECT SPECIALIST

Date	WATERSHED		RAINFALL						TEMPERATURES (degrees F.)		RUN-OFF				RAINFALL MEANS (inches)	515 LBS (tons per acre)	CONTOUR OF WATERSHED		
	Number	Area (acres)	Shape No.	Begin (hour)	Duration (minutes)	Amount (inches)	MAXIMUM INTENSITY			Minimum	Maximum	Ended (hour)	Amount (inches)	MASSWASH RATE					
							5 minutes (inches per hour)	15 minutes (inches per hour)	30 minutes (inches per hour)					Ch. R. sec.				Time	
4/30/34	Plot V	3.25	Parlo 2	11:50	30	0.46	3.12	1.64	.92	70	39		None	(11)	(15)	(16)	(17)	(18)	Bad Clover 9" high. Fair stand. Hats 1" high. Good stand. " " " " " " Bad Clover 10" high. Fair stand. " " " " " "
"	"	1.97	"	"	30	.46	3.12	1.64	.92	70	39		do-				.46	do-	
"	"	1.97	"	"	30	.46	3.12	1.64	.92	70	39		do-				.46	do-	
"	"	3.25	Plum 2	11:50	35	.48	3.60	1.84	.94	70	39		do-				.48	do-	
"	"	3.12	Parlo 2	11:50	30	.46	3.12	1.64	.92	70	39		do-				.46	do-	
"	"	3.12	Plum 2	"	35	.48	3.60	1.84	.94	70	39		do-				.48	do-	
5/1/34	"	3.25	Parlo 2	5:35	102	.38	1.20	.68	.58	75	53		None				.38	None	
"	"	1.97	"	"	102	.38	1.20	.68	.58	75	53		do-				.38	do-	
"	"	1.97	"	"	102	.38	1.20	.68	.58	75	53		do-				.38	do-	
"	"	3.25	Plum 2	5:27	103	.30	.72	.60	.38	75	53		do-				.30	do-	
"	"	3.12	Parlo 2	5:35	102	.38	1.20	.68	.58	75	53		do-				.38	do-	
"	"	3.12	Plum 2	5:27	103	.30	.72	.60	.38	75	53		do-				.30	do-	
5/2/34	Plot V	3.25	Parlo 2	4:15	20	.44	1.92	1.68	.88	92	64		None				.44	None	
"	"	1.97	"	"	20	.44	1.92	1.68	.88	92	64		do-				.44	do-	
"	"	1.97	"	"	20	.44	1.92	1.68	.88	92	64		do-				.44	do-	
"	"	3.25	Plum 2	4:18	22	.38	1.20	1.44	.76	92	64		do-				.38	do-	
"	"	3.12	Parlo 2	4:15	20	.44	1.92	1.68	.88	92	64		do-				.38	do-	
"	"	3.12	Plum 2	4:18	22	.38	1.20	1.44	.76	92	64		do-				.38	do-	
5/12/34	Plot V	3.25	Parlo 2	4:20	93	1.27	3.25	2.56	2.00	83	56	5:26	0.005		0.045	5:44	1.23	0.002	Bad Clover 9" high. Fair stand.
"	"	1.97	"	"	93	1.27	3.25	2.56	2.00	83	56	5:26	.411		2.730	5:46	.38	.361	Hats 1" high. Good stand.
"	"	1.97	"	"	93	1.27	3.25	2.56	2.00	83	56	5:26	.421		1.860	5:37	.37	.716	" " " " " "
"	"	3.25	Plum 2	4:26	90	1.27	3.00	2.08	1.73	83	56	5:21	.113		1.400	5:34	1.16	.416	Bad Clover 10" high. Fair stand.
"	"	3.12	Parlo 2	4:26	93	1.27	3.25	2.56	2.00	83	56	5:21	.023		.123	5:43	1.20	.009	" " 9" high. " "
"	"	3.12	Plum 2	4:26	90	1.31	3.00	2.08	1.73	83	56	5:17							" " " " " "
5/16/34	Plot V	3.25	Parlo 2	6:10	110	.25	1.08	.44	.24	86	63		None				.25	None	
"	"	1.97	"	"	110	.25	1.08	.44	.24	86	63		do-				.25	do-	
"	"	1.97	"	"	110	.25	1.08	.44	.24	86	63		do-				.25	do-	
"	"	1.97	Plum 2	6:10	80	.25	.72	.32	.30	86	63		do-				.25	do-	
"	"	3.12	Parlo 2	6:10	110	.25	1.08	.44	.24	86	63		do-				.25	do-	
"	"	3.12	Plum 2	6:10	80	.25	.72	.32	.30	86	63		do-				.25	do-	
6/3/34	Plot V	3.25	Parlo 2	6:07	151	.44	1.56	1.04	.66	86	63		None				.54	None	
"	"	1.97	"	"	151	.44	1.56	1.04	.66	86	63		do-				.54	do-	
"	"	1.97	"	"	151	.44	1.56	1.04	.66	86	63		do-				.54	do-	
"	"	1.97	Plum 2	6:09	85	.50	1.92	.96	.64	86	63		do-				.50	do-	
"	"	3.12	Parlo 2	6:07	151	.44	1.56	1.04	.66	86	63		do-				.50	do-	
"	"	3.12	Plum 2	6:09	85	.50	1.92	.96	.64	86	63		do-				.50	do-	

* Rainfall computed by using Horton's method of proportioning rainfall.

UNITED STATES DEPARTMENT OF AGRICULTURE
 SOIL CONSERVATION SERVICE
 DIVISION OF RESEARCH

 Month June, July, August, 19 34
 SHEET 2 OF 5 SHEETS

RECORD OF SINGLE STORMS AND THEIR RUN-OFFS ON VARIOUS WATERSHEDS

 PROJECT Charlottesville, Va.

S. S. JOHNSON, DISTRICT ENGINEER

Date	WATERSHED		RAINFALL						TEMPERATURE (degrees F.)		HOURS				Rainfall Moves (inches)	Dry Loss (loss per acre)	Conservation of Watershed
	Number	Area (acres)	Gage No.	Pages (over)	Duration (minutes)	MAXIMUM INTENSITY			Maximum	Minimum	Began (hour)	Ended (hour)	MAXIMUM RATE				
						3 minutes (inches per hour)	15 minutes (inches per hour)	30 minutes (inches per hour)					Cu. ft. sec.	Time			
6/11/34	101	3.25	Part 2	2:45A	61	1.00	1.00	.70	63	64						(14)	
	"	3.25	"	"	61	1.00	1.00	.70	63	64						None	
	"	1.97	"	"	61	1.00	1.00	.70	63	64						.56	
	"	3.25	Run 2	2:45A	85	1.20	.76	.70	63	64						.56	
	"	3.25	Part 2	2:45A	94	1.00	1.00	.70	63	64						.47	
6/12/34	101	3.25	Part 2	2:45A	85	1.20	.76	.70	63	64						.47	
	"	3.25	Part 2	2:45A	85	1.20	.76	.70	63	64						.47	
	101	3.25	Part 2	3:15A	122	.84	.52	.34	75	64						.22	
	"	1.97	"	"	122	.84	.52	.34	75	64						.22	
	"	3.25	"	"	122	.84	.52	.34	75	64						.22	
6/13/34	101	3.25	Part 2	3:15A	123	.72	.40	.20	75	64						.16	
	"	3.25	"	"	123	.72	.40	.20	75	64						.16	
	"	3.25	Part 2	3:15A	123	.72	.40	.20	75	64						.16	
	"	3.25	Part 2	3:15A	123	.72	.40	.20	75	64						.16	
	"	3.25	Part 2	3:15A	123	.72	.40	.20	75	64						.16	
6/14/34	101	3.25	Part 2	2:45A	235	2.76	1.80	1.04	92	63						.83	
	"	3.25	"	"	235	2.76	1.80	1.04	92	63						.83	
	"	1.97	"	"	235	2.76	1.80	1.04	92	63						.83	
	"	3.25	Part 2	2:45A	235	2.76	1.80	1.04	92	63						.72	
	"	3.25	Part 2	2:45A	235	2.76	1.80	1.04	92	63						.72	
7/4/34	101	3.25	Part 2	3:15P	205	1.82	1.24	.76	93	68						.72	
	"	3.25	"	"	205	1.82	1.24	.76	93	68						.72	
	"	1.97	"	"	205	1.82	1.24	.76	93	68						.72	
	"	3.25	Run 2	3:15P	190	2.40	1.28	.76	93	63						.70	
	"	3.25	Part 2	3:15P	205	1.80	1.28	.76	93	68						.70	
7/10/34	101	3.25	Part 2	3:15P	190	2.40	1.28	.76	93	68						.70	
	"	3.25	Part 2	3:15P	190	2.40	1.28	.76	93	68						.70	
	101	3.25	Part 2	3:15P	205	1.80	1.28	.76	93	68						.22	
	"	1.97	"	"	205	1.80	1.28	.76	93	68						.22	
	"	1.97	"	"	205	1.80	1.28	.76	93	68						.22	
7/11/34	101	3.25	Part 2	3:28A	22	1.20	1.00	.54	109	70						.27	
	"	3.25	"	"	22	1.20	1.00	.54	109	70						.27	
	"	1.97	"	"	22	1.20	1.00	.54	109	70						.27	
	"	3.25	Run 2	3:15A	20	1.22	.80	.40	109	70						.27	
	"	3.25	Part 2	3:28A	22	1.20	1.00	.54	109	70						.22	

UNITED STATES DEPARTMENT OF AGRICULTURE
 SOIL CONSERVATION SERVICE
 DIVISION OF RESEARCH

 MONTH August, September, 19 34
 SHEET 3 OF 5 SHEETS

RECORD OF SINGLE STORMS AND THEIR RUN-OFFS ON VARIOUS WATERSHEDS

Project Clarinda, Iowa

Date	Watershed		Rainfall						Temperature (degrees F.)				Run-off				Runoff Meters (inches)	Base Loss (cfs per acre)	Condition of Watershed
	Number	Area (acres)	Gage No.	Begin (hour)	Duration (minutes)	Amount (inches)	Maximum Intensity			Maximum	Minimum	Peak (hour)	Flood (hour)	Amount (inches)	Maximum Rate				
							5 minutes (inches per hour)	15 minutes (inches per hour)	30 minutes (inches per hour)						Cu. ft. sec.	Time			
8/31/34	Plot V	3.25	Tarkio 2	12:20	105	1.10	5.23	3.76	2.08	93	62	None	(13)	(14)	(15)	(16)	(17)	(18)	Oats 3" high. Good stand.
"	"	1.97	"	"	105	1.10	5.28	3.76	2.08	93	62	-do-					1.10	-do-	
"	"	1.97	"	"	105	1.10	5.28	3.76	2.08	93	62	-do-					1.10	-do-	
"	"	3.25	Plum 2	12:15	105	1.16	6.00	4.08	2.32	93	62	-do-					1.16	-do-	
"	"		Tarkio 2	12:20	105	1.10	5.28	3.76	2.08	93	62	-do-					1.16	-do-	
"	"	3.12	Plum 2	12:15	105	1.16	6.00	4.08	2.32	93	62	-do-						-do-	
8/31/34	Plot V	3.25	Tarkio 2	7:10P	125	.25	.81	.64	.38	93	62	-do-					.25	-do-	
"	"	1.97	"	"	125	.25	.81	.64	.38	93	62	-do-					.25	-do-	
"	"	1.97	"	"	125	.25	.81	.64	.38	93	62	-do-					.16	-do-	
"	"	3.25	Plum 2	7:05P	125	.25	.81	.64	.38	93	62	-do-						-do-	
"	"		Plum 2	7:05P	125	.16	.21	.28	.16	93	62	-do-					.16	-do-	
9/2/34	Plot V	3.25	Tarkio 2			1.03	Tarkio #2 Gage Not operating properly.			75	50	-do-					1.03	-do-	
"	"	1.97	"			1.03				75	50	-do-					1.03	-do-	
"	"	1.97	"			1.03				75	50	-do-					1.03	-do-	
"	"	3.25	Plum 2	7:30P	545	.97	1.32	1.04	.64	75	50	-do-					.97	-do-	
"	"		Tarkio 2			1.03				75	50	-do-						-do-	
"	"	3.12	Plu 2	7:30P	545	.97	1.32	1.04	.64	75	50	-do-					.97	-do-	
9/11/34	Plot V	3.25	Tarkio 2	5:40P	29	.41	2.76	1.36	.82	78	54	None					.41	None	
"	"	1.97	"	"	29	.41	2.76	1.36	.82	78	54	-do-					.41	-do-	
"	"	1.97	"	"	29	.41	2.76	1.36	.82	78	54	-do-					.41	-do-	
"	"	3.25	Plum 2	5:40P	113	.48	3.00	1.60	.92	78	54	-do-					.48	-do-	
"	"		Tarkio 2	5:40P	29	.41	2.76	1.36	.82	78	54	-do-						-do-	
"	"	3.12	Plum 2	5:40P	113	.48	3.00	1.60	.92	78	54	-do-					.48	-do-	
9/25/34	Plot V	3.25	Tarkio 2	12:25P	57	.21	1.68	.80	.40	63	40	None					.21	None	
"	"	1.97	"	"	57	.21	1.68	.80	.40	63	40	-do-					.21	-do-	
"	"	1.97	"	"	57	.21	1.68	.80	.40	63	40	-do-						-do-	
"	"	3.25	Plum 2	"	56	.20	1.68	.72	.72	63	40	None					.20	None	
"	"		Tarkio 2	"	57	.21	1.68	.80	.40	63	40	-do-						-do-	
"	"	3.12	Plum 2	"	56	.20	1.68	.72	.72	63	40	-do-					.20	-do-	
9/25/34	Plot V	3.25	Tarkio 2	5:50P	160	.60	1.92	1.08	.64	63	40	None					.60	None	
"	"	1.97	"	"	160	.60	1.92	1.08	.64	63	40	-do-					.60	-do-	
"	"	1.97	"	"	160	.60	1.92	1.08	.64	63	40	-do-						-do-	
"	"	3.25	Plum 2	6:12P	118	.50	1.56	.84	.44	63	40	None					.50	None	
"	"		Tarkio 2	5:50P	160	.60	1.92	1.08	.64	63	40	-do-						-do-	
"	"	3.12	Plum 2	6:12P	118	.50	1.56	.84	.44	63	40	-do-					.50	-do-	

Oats 3" high. Good stand.

UNITED STATES DEPARTMENT OF AGRICULTURE
 SOIL CONSERVATION SERVICE
 DIVISION OF RESEARCH

 Month September, October 1934

 PROJECT Clarinda, Iowa

RECORD OF SINGLE STORMS AND THEIR RUN-OFFS ON VARIOUS WATERSHEDS

 SHEET 4 OF 5 SHEETS

Date	Watershed		Rainfall					Temperature (degrees F.)		Run-off			Run-off Area (acres)	Run-off (cfs per acre)	Comments or Remarks
	Number	Area (acres)	Obs. No.	Time (minutes)	Amount (inches)	5 minutes (inches per hour)	15 minutes (inches per hour)	30 minutes (inches per hour)	Maximum	Minimum	Hour (hour)	Feet (feet)	Amount (acres)	Time	
9/25/34	Plot 7	3.25	Tarkio 2	10:00	.97	1.20	.80	.58	63	36	None	None	0.97	(17)	(19)
"	"	1.97	"	"	.97	1.20	.80	.58	63	36	None	None	.97	"	"
"	"	1.97	"	"	.97	1.20	.80	.58	63	36	None	None	.97	"	"
"	"	3.25	Plum 2	9:50	.97	1.08	.64	.43	63	36	5.23	2.26	1.74	6:25	Both storms of Sept. 25 included
"	"	3.25	Tarkio 2	10:00	.97	1.20	.80	.58	63	36	None	None	.89	"	"
"	"	3.12	Plum 2	9:50	.97	1.08	.64	.43	63	36	None	None	.89	"	"
"	"	3.12	Plum 2	9:50	.97	1.08	.64	.43	63	36	None	None	.89	"	"
9/28/34	Plot 7	3.25	Tarkio 2	11:00	.32	1.14	.88	.50	63	50	None	None	.32	"	"
"	"	1.97	"	"	.32	1.14	.88	.50	63	50	None	None	.32	"	"
"	"	1.97	"	"	.32	1.14	.88	.50	63	50	None	None	.32	"	"
"	"	3.25	Plum 2	11:00	.31	1.20	.72	.43	63	50	None	None	.31	"	"
"	"	3.25	Tarkio 2	11:00	.32	1.14	.88	.50	63	50	None	None	.32	"	"
"	"	3.12	Plum 2	11:00	.31	1.20	.72	.43	63	50	None	None	.31	"	"
10/3/34	Plot 7	3.25	Tarkio 2	5:45	.24	.24	.24	.24	52	43	Refer to 10/19/34 data	Refer to 10/19/34 data	.32	"	Red Clover 8" high. Fair stand.
"	"	1.97	"	"	.24	.24	.24	.24	52	43	Refer to 10/19/34 data	Refer to 10/19/34 data	.32	"	Volunteer oats 10" high.
"	"	1.97	"	"	.24	.24	.24	.24	52	43	Refer to 10/19/34 data	Refer to 10/19/34 data	.32	"	"
"	"	3.25	Plum 2	5:30	.24	.24	.24	.24	52	43	Refer to 10/19/34 data	Refer to 10/19/34 data	.32	"	Red Clover 5" high.
"	"	3.25	Tarkio 2	5:45	.24	.24	.24	.24	52	43	Refer to 10/19/34 data	Refer to 10/19/34 data	.32	"	Red Clover 5" high.
"	"	3.12	Plum 2	5:30	.24	.24	.24	.24	52	43	Refer to 10/19/34 data	Refer to 10/19/34 data	.32	"	Red Clover 6" high.
10/10/34	Plot 7	3.25	Tarkio 2	3:24	.38	1.68	1.32	.82	69	50	Refer to 10/19/34 data	Refer to 10/19/34 data	.38	"	"
"	"	1.97	"	"	.38	1.68	1.32	.82	69	50	Refer to 10/19/34 data	Refer to 10/19/34 data	.38	"	"
"	"	1.97	"	"	.38	1.68	1.32	.82	69	50	Refer to 10/19/34 data	Refer to 10/19/34 data	.38	"	"
"	"	3.25	Plum 2	3:00	.38	2.10	1.61	.88	69	50	Refer to 10/19/34 data	Refer to 10/19/34 data	.38	"	"
"	"	3.25	Tarkio 2	3:24	.38	1.68	1.32	.82	69	50	Refer to 10/19/34 data	Refer to 10/19/34 data	.38	"	"
"	"	3.12	Plum 2	3:00	.38	2.10	1.61	.88	69	50	Refer to 10/19/34 data	Refer to 10/19/34 data	.38	"	"
10/10/34	Plot 7	3.25	Tarkio 2	10:24	.25	2.04	.66	.50	69	50	Refer to 10/19/34 data	Refer to 10/19/34 data	.25	"	Trace
"	"	1.97	"	"	.25	2.04	.66	.50	69	50	Refer to 10/19/34 data	Refer to 10/19/34 data	.25	"	.022
"	"	1.97	"	"	.25	2.04	.66	.50	69	50	Refer to 10/19/34 data	Refer to 10/19/34 data	.25	"	.024
"	"	3.25	Plum 2	10:17	.25	2.04	.66	.50	69	50	Refer to 10/19/34 data	Refer to 10/19/34 data	.25	"	.024
"	"	3.25	Tarkio 2	10:24	.25	2.04	.66	.50	69	50	Refer to 10/19/34 data	Refer to 10/19/34 data	.25	"	.024
"	"	3.12	Plum 2	10:17	.25	2.04	.66	.50	69	50	Refer to 10/19/34 data	Refer to 10/19/34 data	.25	"	.024
10/20/34	Plot 7	3.25	Tarkio 2	1:57	.21	.36	.56	.32	65	57	Refer to 10/19/34 data	Refer to 10/19/34 data	.21	"	.001
"	"	1.97	"	"	.21	.36	.56	.32	65	57	Refer to 10/19/34 data	Refer to 10/19/34 data	.21	"	None
"	"	1.97	"	"	.21	.36	.56	.32	65	57	Refer to 10/19/34 data	Refer to 10/19/34 data	.21	"	None
"	"	3.25	Plum 2	1:55	.20	.36	.56	.32	65	57	Refer to 10/19/34 data	Refer to 10/19/34 data	.20	"	None
"	"	3.25	Tarkio 2	1:57	.21	.36	.56	.32	65	57	Refer to 10/19/34 data	Refer to 10/19/34 data	.21	"	None
"	"	3.12	Plum 2	1:55	.20	.36	.56	.32	65	57	Refer to 10/19/34 data	Refer to 10/19/34 data	.20	"	None

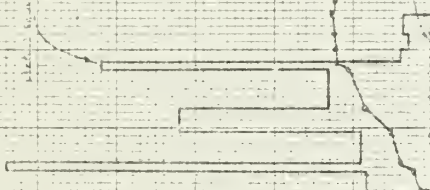
Rainfall computed by using Horton's method of proportioning rainfall.

UNITED STATES DEPARTMENT OF AGRICULTURE
 SOIL CONSERVATION SERVICE
 DIVISION OF RESEARCH
Month November, 1924Sheet 5 of 5 SHEETS

RECORD OF SINGLE STORMS AND THEIR RUN-OFFS ON VARIOUS WATERSHEDS

Property Clarinda, Iowa

Date	WATERSHED				RAINFALL							TEMPERATURE (degrees F.)				RUN-OFF				RAINFALL MEANS (inches)	Net Loss (acre per day)	DIRECTION OF WATERSHED
	Number	Area (acres)	Shape No.	Points (feet)	Direction (inches)	Amount (inches)	MAXIMUM TEMPERATURE			Minimum	Amount (cubic feet)	Feet/d (feet)	MAXIMUM RATE		Feet/d (feet)							
							5 minutes (inches per hour)	15 minutes (inches per hour)	30 minutes (inches per hour)				Cu. Ft. sec.	Time								
11/23/24	Lot Y	3.25	Part 2	9:20	730	1.12	.48	.14	.24	.60	35	None	(18)	(15)	(16)	1.19	None	(19)				
"	"	1.97	"	"	730	1.19	.48	.14	.24	.60	35	None				1.19	None					
"	"	1.97	"	"	730	1.12	.48	.14	.24	.60	35	None				1.19	None					
"	Y	3.25	Plum 2	9:55	745	1.08	.48	.10	.26	.60	35	None				1.08	None					
"	"	3.25	Part 2	9:40	730	1.19	.48	.14	.24	.60	35	None				1.08	None					
"	Z	3.12	Plum 2	9:55	745	1.08	.48	.10	.26	.60	35	None				1.08	None					
11/17/24	Lot Y	3.25	Part 2	11:32	172	.45	.60	.32	.22	.50	50	None				.45	None					
"	"	1.97	"	"	172	.45	.60	.32	.22	.50	50	None				.45	None					
"	"	1.97	"	"	172	.45	.60	.32	.22	.50	50	None				.45	None					
"	Y	3.25	Plum 2	11:50	172	.47	.60	.32	.20	.50	50	None				.47	None					
"	"	3.12	Plum 2	11:50	172	.47	.60	.32	.20	.50	50	None				.47	None					
11/19/24	Lot Z	3.25	Part 2	7:30	135	.22	.36	.24	.18	.67	14	None				.22	None					
"	"	1.97	"	"	135	.22	.36	.24	.18	.67	14	None				.22	None					
"	"	1.97	"	"	135	.22	.36	.24	.18	.67	14	None				.22	None					
"	Y	3.25	Plum 2	7:15	150	.16	.48	.20	.20	.67	14	None				.16	None					
"	"	3.12	Plum 2	7:15	150	.16	.48	.20	.20	.67	14	None				.16	None					
11/20/24	Lot Y	3.25	Part 2	4:00	235	.40	.36	.36	.28	.52	14	None				.40	None					
"	"	1.97	"	"	235	.40	.36	.36	.28	.52	14	None				.40	None					
"	"	1.97	"	"	235	.40	.36	.36	.28	.52	14	None				.40	None					
"	Y	3.12	Plum 2	3:15	235	.40	.36	.36	.28	.52	14	None				.40	None					
"	"	3.12	Plum 2	3:15	235	.40	.36	.36	.28	.52	14	None				.40	None					
11/21/24	Lot Z	3.25	Part 2	4:20	330	.35	.24	.16	.14	.44	30	None				.35	None					
"	"	1.97	"	"	330	.35	.24	.16	.14	.44	30	None				.35	None					
"	"	1.97	"	"	330	.35	.24	.16	.14	.44	30	None				.35	None					
"	Y	3.25	Plum 2	4:05	290	.34	.12	.12	.12	.44	30	None				.34	None					
"	"	3.12	Plum 2	4:20	330	.35	.24	.16	.14	.44	30	None				.34	None					
"	Z	3.12	Plum 2	4:25	290	.34	.12	.12	.12	.44	30	None				.34	None					
11/25/24	Lot Z	3.25	Part 2	11:05	590	.63	.24	.16	.10	.46	33	None				.63	None					
"	"	1.97	"	"	590	.63	.24	.16	.10	.46	33	None				.63	None					
"	"	1.97	"	"	590	.63	.24	.16	.10	.46	33	None				.63	None					
"	Y	3.25	Plum 2	10:55	590	.60	.24	.16	.10	.46	33	None				.60	None					
"	"	3.12	Plum 2	11:05	590	.63	.24	.16	.10	.46	33	None				.60	None					
"	Z	3.12	Plum 2	10:55	590	.60	.24	.16	.10	.46	33	None				.60	None					



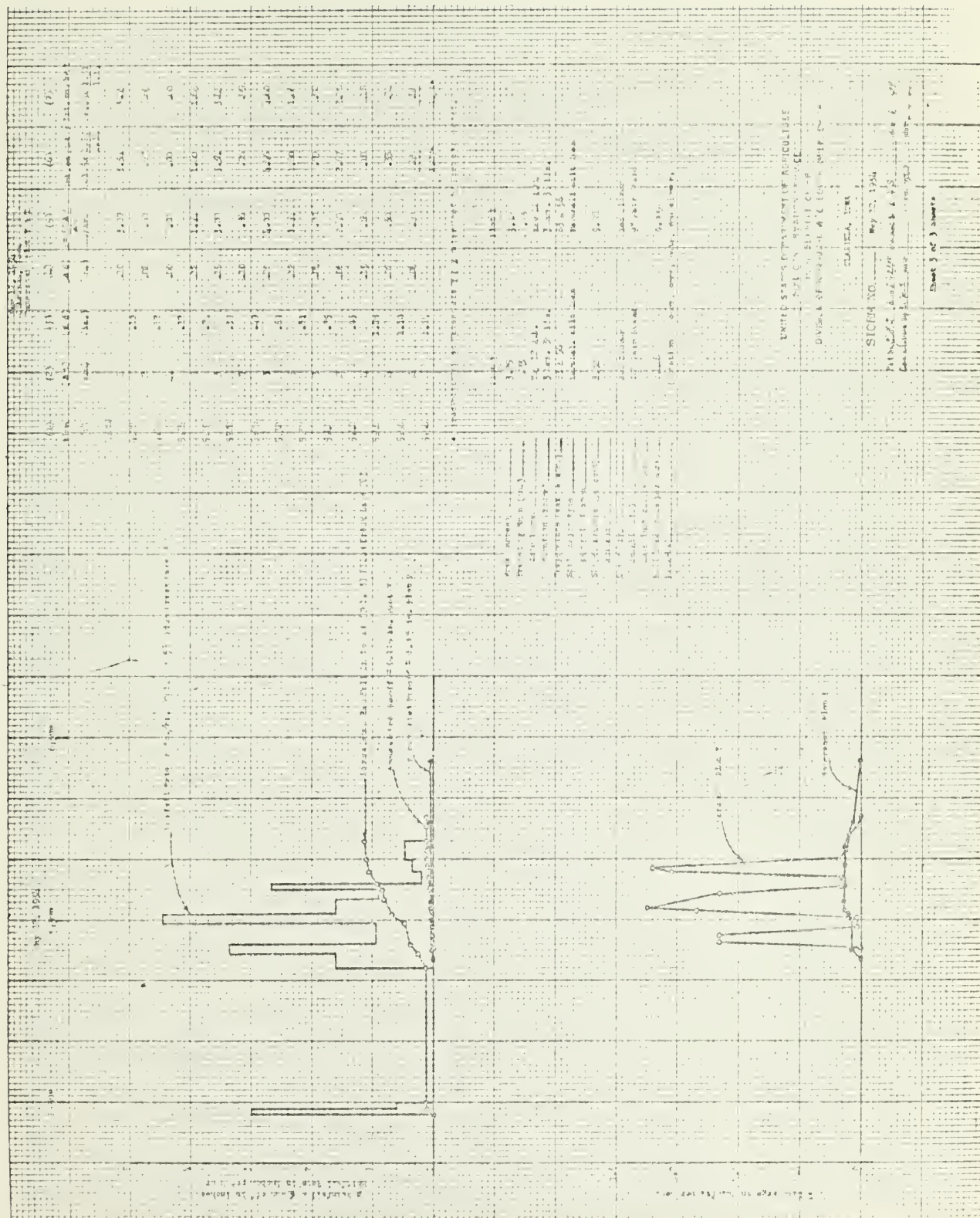
Year	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
1900	1	2	3	4	5	6	7	8	9	10	11	12	100
1901	1	2	3	4	5	6	7	8	9	10	11	12	100
1902	1	2	3	4	5	6	7	8	9	10	11	12	100
1903	1	2	3	4	5	6	7	8	9	10	11	12	100
1904	1	2	3	4	5	6	7	8	9	10	11	12	100
1905	1	2	3	4	5	6	7	8	9	10	11	12	100
1906	1	2	3	4	5	6	7	8	9	10	11	12	100
1907	1	2	3	4	5	6	7	8	9	10	11	12	100
1908	1	2	3	4	5	6	7	8	9	10	11	12	100
1909	1	2	3	4	5	6	7	8	9	10	11	12	100
1910	1	2	3	4	5	6	7	8	9	10	11	12	100
1911	1	2	3	4	5	6	7	8	9	10	11	12	100
1912	1	2	3	4	5	6	7	8	9	10	11	12	100
1913	1	2	3	4	5	6	7	8	9	10	11	12	100
1914	1	2	3	4	5	6	7	8	9	10	11	12	100
1915	1	2	3	4	5	6	7	8	9	10	11	12	100
1916	1	2	3	4	5	6	7	8	9	10	11	12	100
1917	1	2	3	4	5	6	7	8	9	10	11	12	100
1918	1	2	3	4	5	6	7	8	9	10	11	12	100
1919	1	2	3	4	5	6	7	8	9	10	11	12	100
1920	1	2	3	4	5	6	7	8	9	10	11	12	100
1921	1	2	3	4	5	6	7	8	9	10	11	12	100
1922	1	2	3	4	5	6	7	8	9	10	11	12	100
1923	1	2	3	4	5	6	7	8	9	10	11	12	100
1924	1	2	3	4	5	6	7	8	9	10	11	12	100
1925	1	2	3	4	5	6	7	8	9	10	11	12	100
1926	1	2	3	4	5	6	7	8	9	10	11	12	100
1927	1	2	3	4	5	6	7	8	9	10	11	12	100
1928	1	2	3	4	5	6	7	8	9	10	11	12	100
1929	1	2	3	4	5	6	7	8	9	10	11	12	100
1930	1	2	3	4	5	6	7	8	9	10	11	12	100
1931	1	2	3	4	5	6	7	8	9	10	11	12	100
1932	1	2	3	4	5	6	7	8	9	10	11	12	100
1933	1	2	3	4	5	6	7	8	9	10	11	12	100
1934	1	2	3	4	5	6	7	8	9	10	11	12	100
1935	1	2	3	4	5	6	7	8	9	10	11	12	100

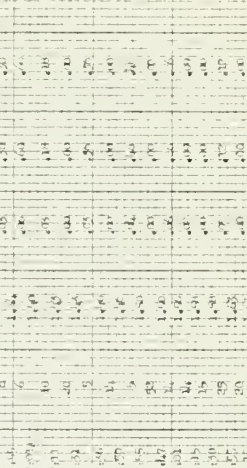
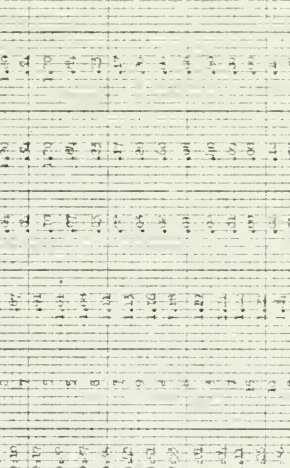
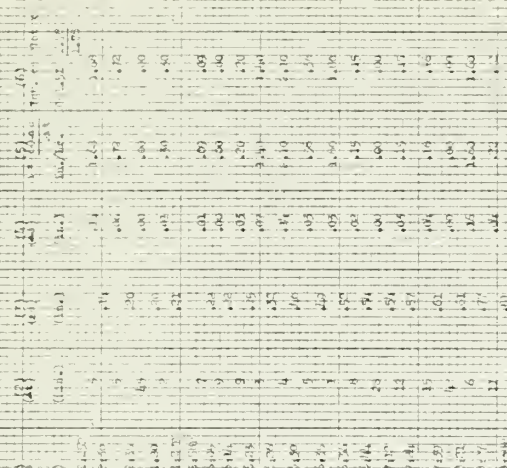
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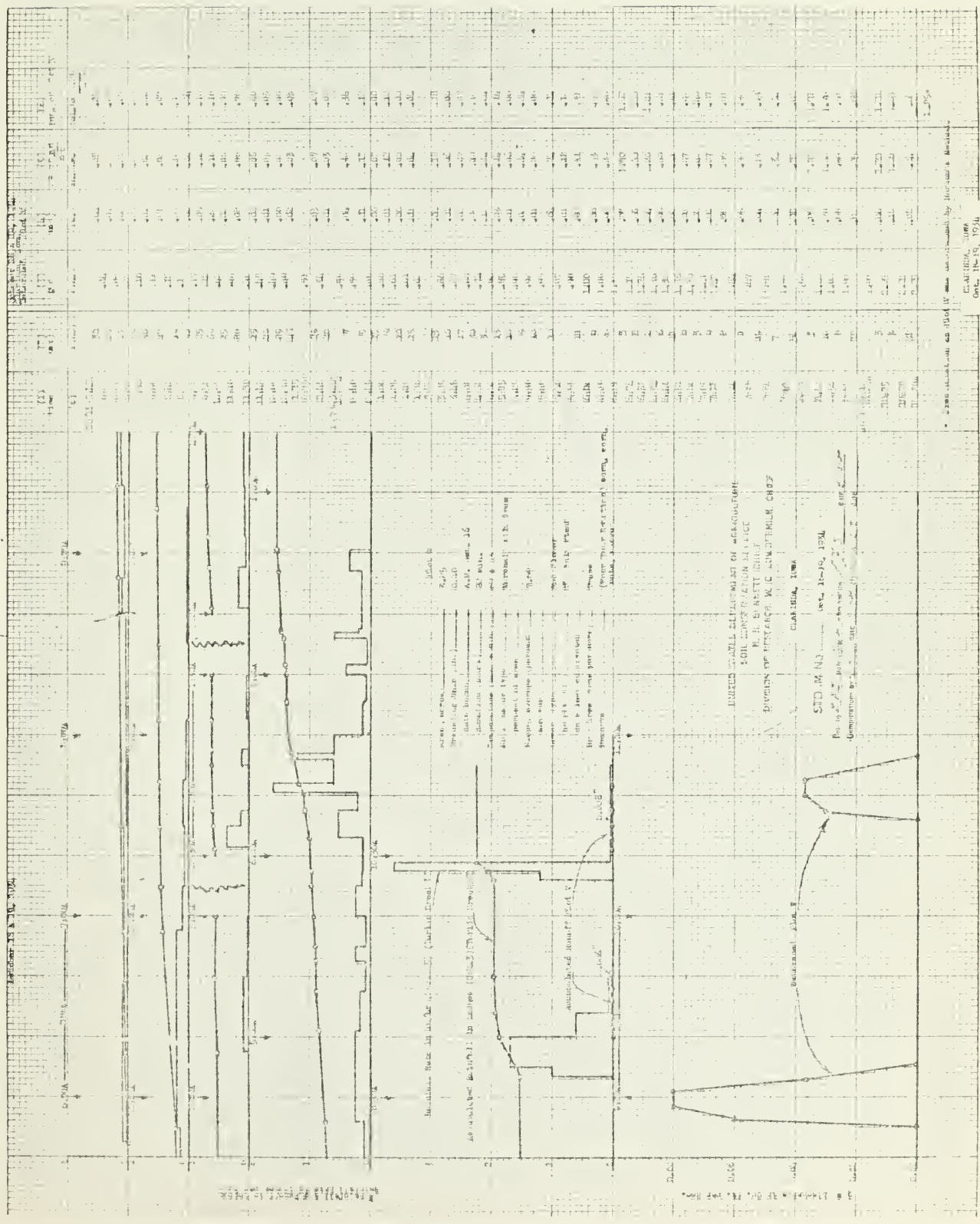
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UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
H. H. BENNETT, Chief
BUREAU OF RESEARCH, WASHINGTON, D. C.

STUDY NO. 74
by S. J. P. ...
May 12, 1934







UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
DIVISION OF RESEARCH

MONTH Jan., April, May, 1935
SHEET 1 OF 8 SHEETS

RECORD OF SINGLE STORMS AND THEIR RUN-OFFS ON VARIOUS WATERSHEDS

PROJECT Clarinda, Iowa

DATE	WATERSHED		RAINFALL						TEMPERATURE (degrees F.)		RUN-OFF				RAINFALL MINIMUM (inches)	SIZE LOSS (tons per acre)	CONDITION OF WATERSHED	
	Number	Area (acres)	Ouse No.	Began (hour)	Duration (minutes)	Amount (inches)	MAXIMUM INTENSITY			Maximum	Minimum	Began (hour)	Ended (hour)	MAXIMUM RATE				
							5 minutes (inches per hour)	15 minutes (inches per hour)	30 minutes (inches per hour)					Co. ft. sec.				Time
1/18/35	Plot V	3.25	Tark.2	7:45P	210	.30	.36	.32	.28	36	23	Refer to 1/19/39 rain				None	Red Cl. sod. Ground frozen.	
"	" W	1.97	"	"	210	.30	.36	.32	.28	36	23					None	Sod of Volunteer Oats. Winter killed Ground frozen.	
"	" X	1.97	"	"	210	.30	.36	.32	.28	36	23	Refer to 1/19/39 rain				None		
"	" Y	3.25	Plum 2	8:35P	140	.31	.60	.56	.48	36	23							
"	" Z	3.12	Tark.2	7:45P	210	.30	.36	.32	.28	36	23	Refer to 1/19/39 rain					Red Cl. sod. Ground frozen.	
1/19/35	Plot V	3.25	Tark.2	1:35P	175	.27	.36	.32	.24	33	2					.47	No hydrograph obtained.	
"	" W	1.97	"	"	175	.27	.36	.32	.24	33	2					.27	"	
"	" X	1.97	"	"	175	.27	.36	.32	.24	33	2					.56	"	
"	" Y	3.25	Plum 2	1:45P	120	.25	.48	.28	.16	33	2					.24	"	
"	" Z	3.12	Tark.2	1:35P	175	.27	.36	.32	.24	33	2					.53	"	
1/22/35	Plot V	3.25	Tark.2	9:10P	620	.29	.12	.08	.06	51	32					None		
"	" W	1.97	"	"	620	.29	.12	.08	.06	51	32					None		
"	" X	1.97	"	"	620	.29	.12	.08	.06	51	32					None		
"	" Y	3.25	Plum 2	9:20P	265	.20	.12	.12	.10	51	32					None		
"	" Z	3.12	Tark.2	9:10P	620	.29	.12	.08	.06	51	32					None		
5/1/35	Plot V	3.25	Tark.2	1:15A	75	.34	1.32	.75	.64	76	44					.34		
"	" W	1.97	"	"	75	.34	1.32	.75	.64	76	44					.34		
"	" X	1.97	"	"	75	.34	1.32	.75	.64	76	44					.34		
"	" Y	3.25	Plum 2	1:16A	60	.34	1.68	1.00	.62	76	44					None		
"	" Z	3.12	Tark.2	1:15A	75	.34	1.32	.75	.64	76	44					None		
5/11/35	Plot V	3.25	Plum 2	1:16A	60	.34	1.68	1.00	.62	76	44					None		
"	" W	1.97	Tark.2	8:20P	75	.50	1.44	1.44	.86	72	60					None		
"	" X	1.97	"	"	75	.50	1.44	1.44	.86	72	60					None		
"	" Y	3.25	Plum 2	8:18P	112	.51	1.44	1.36	.78	72	60					None		
"	" Z	3.12	Tark.2	8:20P	75	.50	1.44	1.44	.86	72	60					None		
5/12/35	Plot V	3.25	Plum 2	8:18P	112	.51	1.44	1.36	.78	72	72					None		
"	" W	1.97	Tark.2	12:00NN	95	.18	.48	.48	.32	66	47					None		
"	" X	1.97	"	"	95	.18	.48	.48	.32	66	47					None		
"	" Y	3.25	Plum 2	11:59P	85	.21	.48	.48	.38	66	47					None		
"	" Z	3.12	Tark.2	12:00NN	95	.18	.48	.48	.32	66	47					None		
"	"		Plum 2	11:59P	85	.21	.60	.48	.38	66	47					None		

UNITED STATES DEPARTMENT OF AGRICULTURE
 SOIL CONSERVATION SERVICE
 DIVISION OF RESEARCH
Month May, 1935SHEET 2 OF 8 SHEETS

RECORD OF SINGLE STORMS AND THEIR RUN-OFFS ON VARIOUS WATERSHEDS

Project Clarinda, Iowa

DATE	WATERSHED		RAINFALL							TABULAR PEAK (Inches, F.)			RUN-OFF				BENEFICIAL MINUTES (inches)	SILT LOSS (tons per acre)	CONDITION OF WATERSHED	
	Number	Area (acres)	Gage No.	Time (hour)	Duration (minutes)	Amount (inches)	MAXIMUM INTENSITY			Maximum	Minimum	Peak (hour)	Amount (inches)	MAXIMUM RATE						
							4 minutes (inches per hour)	10 minutes (inches per hour)	30 minutes (inches per hour)					Cu. ft. sec.	Time					
5/13/35	Plot V	3.25	Tark. 2	4:25A	185	.26	0.72	0.40	0.22	58	47		None		(12)	(14)	(16)	(18)	(19)	
"	"	1.97	"	"	185	.26	.72	.40	.22	58	47		-do-							
"	"	1.97	"	"	185	.26	.72	.40	.22	58	47		-do-							
"	"	3.25	Plum 2	4:25A	100	.19	.72	.40	.22	58	47		-do-							
"	"	3.12	Tark. 2	4:25A	185	.26	.72	.40	.22	58	47		-do-							
"	"	3.12	Plum 2	4:25A	100	.19	.72	.40	.22	58	47		-do-							
5/15/35	Plot V	3.25	Tark. 2	2:15P	225	.43	.24	.24	.20	49	45		None							
"	"	1.97	"	"	225	.43	.24	.24	.20	49	45		-do-							
"	"	1.97	"	"	225	.43	.24	.24	.20	49	45		-do-							
"	"	3.25	Plum 2	3:08P	170	.42	.36	.20	.20	49	45		-do-							
"	"	3.12	Tark. 2	2:15P	225	.43	.24	.24	.20	49	45		-do-							
"	"	3.12	Plum 2	3:08P	170	.42	.36	.20	.20	49	45		-do-							
5/19/35	Plot V	3.25	Tark. 2	12:20A	115	.64	.48	.40	.28	53	46		None							No hydrograph.
"	"	1.97	"	"	115	.63	.48	.40	.28	53	46		Refer to 5/20/35 storm							No hydrograph.
"	"	1.97	"	"	115	.63	.48	.40	.28	53	46		None							
"	"	3.25	Plum 2	12:15A	358	.63	.48	.40	.28	53	46		None							
"	"	3.12	Tark. 2	12:20A	115	.64	.48	.40	.28	53	46		-do-							
"	"	3.12	Plum 2	12:15A	358	.63	.48	.40	.28	53	46		-do-							
5/19/35	Plot V	3.25	Tark. 2	9:00P	525	.85	.96	.80	.58	61	46		None							Plowed & harrowed ready for pl- anting corn.
"	"	1.97	"	"	525	.85	.96	.80	.58	61	46		Refer to 5/20/35 storm							Plowed & harrowed ready for pl- anting corn.
"	"	1.97	"	"	525	.85	.96	.80	.58	61	46		None							
"	"	3.25	Plum 2	10:30P	405	.78	.96	.80	.58	61	46		None							
"	"	3.25	Tark. 2	9:00P	525	.85	.96	.80	.58	61	46		-do-							
"	"	3.12	Plum 2	10:30P	405	.78	.96	.80	.58	61	46		-do-							
5/20/35	Plot V	3.25	Tark. 2	10:30A	300	.27	.24	.08	.08	61	51		None							All run-off caught in silt box.
"	"	1.97	"	"	300	1.96	.24	.08	.08	61	51		.008							All run-off caught in silt box.
"	"	1.97	"	"	300	1.96	.24	.08	.08	61	51		.015							All run-off caught in silt box.
"	"	3.25	Plum 2	11:05A	250	.29	.12	.12	.12	61	51		None							
"	"	3.25	Tark. 2	10:30A	300	.27	.24	.08	.08	61	51		-do-							
"	"	3.12	Plum 2	11:05A	250	.29	.12	.12	.12	61	51		-do-							
5/22/35	Plot V	3.25	Tark. 2	3:25P	205	.46	1.20	.88	.60	60	46		None							Plowed. No hydrograph.
"	"	1.97	"	"	205	.46	1.20	.88	.60	60	46		None							
"	"	1.97	"	"	205	.46	1.20	.88	.60	60	46		None							
"	"	3.25	Plum 2	4:45P	85	.34	1.20	.76	.56	60	46		.006							
"	"	3.25	Tark. 2	3:25P	205	.46	1.20	.88	.60	60	46		None							
"	"	3.12	Plum 2	4:45P	85	.34	1.20	.76	.56	60	46		None							

* Rainfall computed by using Horton's Method of proportioning rainfall.

UNITED STATES DEPARTMENT OF AGRICULTURE
 SOIL CONSERVATION SERVICE
 DIVISION OF RESEARCH

 MONTH May, June, 19 35
 SHEET 3 OF 8 SHEETS

RECORD OF SINGLE STORMS AND THEIR RUN-OFFS ON VARIOUS WATERSHEDS

PROJECT Clarinda, Iowa

Date	WATERSHED		RAINFALL						TEMPERATURE (degrees F.)		RUN-OFF				RAINFALL MINUS RUN-OFF (inches)	SURF LOSS (tons per acre)	C. NOTION OF WATERSHED
	Number	Area (acres)	Gage No.	Began (hour)	Duration (minutes)	Amount (inches)	MAXIMUM INTENSITY			Minimum	Maximum	Began (hour)	Ended (hour)	Amount (inches)			
							MAXIMUM RATE										
							5 minutes (inches per hour)	15 minutes (inches per hour)	30 minutes (inches per hour)									Cu ft. sec.	Time
5/2/35	Plot V	3.25	Tark.2	10:15P	50	1.29	1.33	1.08	0.80	12:12 A	11:02A	None	0.037	12:17	1.29	None	Corn planted. No hydrograph.
"	" W	1.97	"	"	50	1.29	2.04	1.08	.80	"	"	0.003	"	"	1.29	0.004	
"	" X	1.97	"	"	50	1.29	2.04	1.08	.80	"	"	.009	"	"	1.28	.005	
"	" Y	3.25	Plum 2	10:20P	50	1.31	1.60	1.08	.78	"	"	None	"	"	1.31	None	
"	" Z	3.12	Tark.2	10:15P	50	1.29	1.33	1.08	.80	"	"	None	"	"	1.31	-do-	No hydrograph obtained.
5/29/35	Plot V	3.25	Tark.2	6:05P	90	.18	.24	.24	.20	"	"	None	"	"	.18	None	
"	" W	1.97	"	"	90	.18	.24	.24	.20	"	"	-do-	"	"	.18	-do-	
"	" X	1.97	"	"	90	.18	.24	.24	.20	"	"	-do-	"	"	.18	-do-	
"	" Y	3.25	Plum 2	5:55P	115	.21	.24	.24	.20	"	"	-do-	"	"	.21	-do-	No hydrograph obtained.
"	" Z	3.12	Tark.2	6:05P	90	.18	.24	.24	.20	"	"	-do-	"	"	.21	-do-	
5/31/35	Plot V	3.25	Tark.2	8:15A	155	.72	3.64	1.24	.72	Refer to 6/1/35 rain.	"	Refer to 6/1/35 rain.	"	"	.21	-do-	
"	" W	1.97	"	"	155	.72	2.64	1.24	.72	-do-	-do-	-do-	"	"	"	"	
"	" X	1.97	"	"	155	.72	2.64	1.24	.72	-do-	-do-	-do-	"	"	"	"	No hydrograph obtained.
"	" Y	3.25	Plum 2	8:20A	145	.66	2.64	1.00	.66	-do-	-do-	-do-	"	"	"	"	
"	" Z	3.12	Tark.2	8:15A	155	.72	2.64	1.24	.72	-do-	-do-	-do-	"	"	"	"	
"	"	"	Plum 2	8:20A	145	.66	2.64	1.00	.66	-do-	-do-	-do-	"	"	"	"	
5/31/35	Plot V	3.25	Tark.2	12:30P	90	.64	1.20	.88	.64	Refer to 6/1/35	"	Refer to 6/1/35	"	"	"	"	No hydrograph obtained.
"	" W	1.97	"	"	90	.64	1.20	.88	.64	-do-	-do-	-do-	"	"	"	"	
"	" X	1.97	"	"	90	.64	1.20	.88	.64	-do-	-do-	-do-	"	"	"	"	
"	" Y	3.25	Plum 2	12:20P	100	.84	1.68	.84	.64	-do-	-do-	-do-	"	"	"	"	
"	" Z	3.12	Tark.2	12:30P	90	.64	1.20	.88	.64	-do-	-do-	-do-	"	"	"	"	No hydrograph obtained.
"	"	"	Plum 2	12:20P	100	.84	1.68	.84	.64	-do-	-do-	-do-	"	"	"	"	
6/1/35	Plot V	3.25	Tark.2	9:40P	200	.52	1.08	.52	.40	Refer to 6/1/35 rain	"	Refer to 6/1/35 rain	"	"	"	"	
"	" W	1.97	"	"	200	.52	1.08	.52	.40	-do-	-do-	-do-	"	"	"	"	
"	" X	1.97	"	"	200	.52	1.08	.52	.40	-do-	-do-	-do-	"	"	"	"	Corn 1" high planted with fur- row openers "
"	" Y	3.25	Plum 2	9:35P	200	.52	.84	.26	.32	-do-	-do-	-do-	"	"	"	"	
"	" Z	3.12	Tark.2	9:40P	200	.52	1.08	.52	.40	-do-	-do-	-do-	"	"	"	"	
"	"	"	Plum 2	9:35P	200	.52	.84	.26	.32	-do-	-do-	-do-	"	"	"	"	
6/2/35	Plot V	3.25	Tark.2	4:40 A	115	2.31*	1.44	1.00	.62	5/31 6/2	7:22A	.067	.125	6/2	2.24	.017	Corn 1" high planted with fur- row openers "
"	" W	1.97	"	"	115	2.31*	1.44	1.00	.62	1:15P	7:22A	.330	1.90	5:19 A	1.98	1.432	
"	" X	1.97	"	"	115	2.31*	1.44	1.00	.62	9:10A	6:53A	.121	.57	5:53 A	1.89	.165	
"	" Y	3.25	Plum 2	4:30A	120	2.24*	1.68	1.12	.68	9:02A	7:53 A	.073	"	5:57 A	2.17	.021	
"	" Z	3.12	Tark.2	4:40A	115	2.21*	1.44	1.00	.62	"	"	.008	"	"	2.20	.003	-do- No hydrograph
"	"	"	Plum 2	4:30A	120	2.21*	1.68	1.12	.68	"	"	"	"	"	"	"	-do- No hydrograph

*Rainfall computed by using Horton's Method of proportioning rainfall.

UNITED STATES DEPARTMENT OF AGRICULTURE
 SOIL CONSERVATION SERVICE
 DIVISION OF RESEARCH

Moore, Jesse, 1935

Savoy, L. O. 8, 1935

RECORD OF SINGLE STORMS AND THEIR RUN-OFFS ON VARIOUS WATERSHEDS

Project—Clairland, Iowa

Date	WATERSHED			RAINFALL							THUNDERSTORM (colspan 3)			Run-off				Remarks on Run-off	Riz. Loss (thous. per acre)	Remarks on Run-off		
	Number	Area (acres)	Shape	Chase N.	Duration (minutes)	Peak (feet)	Maximum Intensity			M. maximum	M. minimum	M. maximum	Amount (cubic feet)	Maximum Run		On R. in	Time					
							4 minutes (thous. per hour)	16 minutes (thous. per hour)	24 minutes (thous. per hour)					On R. in	Time							
6/3/35	Plot V	3.25	Tark. 2	4:55P	190	4.7	1.68	0.88	0.69	74	54	54	5:11P	6:00	0.138	0.018	0.15	0.006	Corn 3 rd high			
	"	1.97	"	"	190	4.7	1.68	0.88	0.78	74	54	54	5:09P	5:38	0.095	0.021	0.15	0.006	do-			
	"	1.97	"	"	190	4.7	1.68	0.88	0.68	74	54	54	5:10P	6:30	0.09	0.033	0.16	0.006	Corn 2 nd high			
	"	3.25	Plum 2	4:55P	35	4.9	1.80	0.68	0.68	69	54	54				0.032	0.001	0.01	0.006	do-		
6/6/35	Plot V	3.25	Tark. 2	7:45P	65	3.9	0.78	0.68	0.58	52	46	46	7:17P	8:06	0.06	0.006	0.39	0.001	Corn 3 rd high			
	"	1.97	"	"	65	3.9	0.84	0.68	0.58	52	46	46				0.006	0.001	0.38	0.001	do-		
	"	1.97	"	"	65	3.9	0.84	0.68	0.53	52	46	46				0.006	0.001	0.38	0.001	do-		
	"	3.25	Plum 2	7:30P	60	4.1	0.96	0.72	0.58	58	52	52				0.010	0.003	0.40	0.003	do-		
6/10/35	Plot V	3.12	Tark. 2	7:30P	60	4.5	0.96	0.68	0.58	52	46	46				0.001	0.001	0.45	0.001	do-		
	"	1.97	"	"	87	3.2	2.10	1.26	1.16	61	61	61				0.001	0.001	0.32	0.001	Corn 4 th high		
	"	1.97	"	"	87	3.2	2.10	1.26	0.60	61	61	61	2:41 A	2:55	0.16	0.027	0.29	0.121	do-			
	"	3.25	Plum 2	2:47 A	10	3.0	2.14	0.80	0.40	61	61	61	2:40 A	7:12	0.06	0.065	0.26	0.010	do-			
6/17/35	Plot V	3.12	Tark. 2	2:38 A	87	3.2	2.10	1.16	0.60	61	61	61				None	None	0.20	None	do-		
	"	1.97	"	"	10	3.0	2.14	0.80	0.40	61	61	61				None	None	0.20	None	do-		
	"	3.25	Plum 2	2:47 A	10	3.0	2.14	0.80	0.40	61	61	61				None	None	0.20	None	do-		
	"	3.12	Tark. 2	2:47 A	10	3.0	2.14	0.80	0.40	61	61	61				None	None	0.20	None	do-		
6/18/35	Plot V	3.25	Tark. 2	7:10 A	210	2.2	1.20	0.80	0.54	73	62	62	Refer to 6/17	8:18/55	0.001	0.001	2.21	0.003	do-			
	"	1.97	"	"	210	2.2	1.20	0.80	0.54	73	62	62				0.001	0.001	2.15	0.003	Corn 6 th high		
	"	1.97	"	"	210	2.2	1.20	0.80	0.54	73	62	62				0.001	0.001	2.15	0.003	do-		
	"	3.25	Plum 2	7:55 A	85	2.2	1.20	0.80	0.54	73	62	62				0.001	0.001	2.18	0.003	Corn 7 th high		
6/20/35	Plot V	3.12	Tark. 2	7:55 A	85	2.2	1.20	0.80	0.54	73	62	62				0.001	0.001	2.18	0.003	do-		
	"	1.97	"	"	570	2.2	1.32	0.76	0.50	73	53	53				0.001	0.001	2.19	0.001	do-		
	"	1.97	"	"	570	2.2	1.32	0.76	0.50	73	53	53				0.001	0.001	2.19	0.001	do-		
	"	3.25	Plum 2	5:37P	588	2.2	1.44	0.72	0.50	73	53	53				0.001	0.001	2.19	0.001	do-		
6/20/35	Plot V	3.25	Tark. 2	5:37P	588	2.2	1.44	0.72	0.50	73	53	53				0.001	0.001	2.19	0.001	do-		
	"	1.97	"	"	105	2.2	2.1	0.21	0.20	75	58	58				None	None	2.2	None	Corn 7 th high		
	"	1.97	"	"	105	2.2	2.1	0.21	0.20	75	58	58				0.001	0.001	2.2	0.006	Corn 9 th high		
	"	3.25	Plum 2	6:55 A	75	2.0	2.5	0.25	0.22	75	58	58				None	None	2.0	None	do-		
6/20/35	Plot V	3.12	Tark. 2	6:55 A	75	2.0	2.5	0.25	0.22	75	58	58				None	None	2.0	None	do-		
	"	3.12	Plum 2	6:55 A	75	2.0	2.5	0.25	0.22	75	58	58				None	None	2.0	None	do-		

*Rainfall computed by using Horton's Method of proportioning rainfall.

UNITED STATES DEPARTMENT OF AGRICULTURE
 SOIL CONSERVATION SERVICE
 DIVISION OF RESEARCH

 MONTH June, July, August, 1935

 PROJECT Clartanda, Iowa

RECORD OF SINGLE STORMS AND THEIR RUN-OFFS ON VARIOUS WATERSHEDS

 SHEET 5 OF 8 SHEETS

Date	WATERSHED		RAINFALL					TRANSFORMATION (degrees F)				RIP-OFF				RAINFALL MINUS TRANSFORMATION (inches)	Dry Loss (tons per acre)	Condition of Watershed	
	Number	Area (acres)	Oage No.	Recep (hour)	Duration (minutes)	Amount (cubic feet)	MAXIMUM INTENSITY			Maximum	Minimum	Bores (hour)	Exided (hour)	Amount (cubic feet)	MAXIMUM RATE				
							5 minutes (inches per hour)	15 minutes (inches per hour)	30 minutes (inches per hour)						Cu ft. sec.				Time
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	
6/24/35	Plot V	3.25	Tark-2	6:34A	106	.79*	2.52	1.60	.92	80	63	7:02A	7:23	0.005	0.46	7:09	0.004	Corn 9" high. No hydrograph	
"	"	1.97	"	"	106	.79*	2.52	1.60	.92	80	63			.033	.06	7:09	.094	Corn 8" high	
"	"	1.97	"	"	106	.79*	2.52	1.60	.92	80	63			.056	.06	6:59	.015	Corn 7" high	
"	"	3.25	Plum-2	6:44A	64	.79*	2.10	1.48	.98	80	63			.014			.002	Corn 11" high	
"	"	3.12	Tark-2	6:34A	106	.78*	2.52	1.60	.92	80	63							-do-	
"	"	3.12	Plum-2	6:44A	64		2.10	1.48	.98	80	63			.002			.001	-do-	
6/26/35	Plot V	3.25	Tark-2	3:40A	80	.70*	2.88	1.68	1.24	84	58	3:55A	5:26	.042	.31	4:15	.036	Corn 11" high. Rotary hood.	
"	"	1.97	"	"	80	.70*	2.88	1.68	1.24	84	58			.111	2:01	4:08	.959	Corn 10" high. Rotary hood.	
"	"	1.97	"	"	80	.70*	2.88	1.68	1.24	84	58	3:52A	7:01	.120	.29	4:07	.148	Corn 11" high. Rotary hood.	
"	"	3.25	Plum-2	3:40A	80	.63*	1.80	1.60	.98	84	58			.024			.003	Corn 11" high. Rotary hood. No hydrograph.	
"	"	3.12	Tark-2	3:40A	80	.70*	2.88	1.68	1.24	84	58				.15	4:15	.009	Corn 11" high. Rotary hood.	
"	"	3.12	Plum-2	3:40A	80	.64*	1.80	1.60	.98	84	58	4:04A	4:51	.014					
6/30/35	Plot V	3.25	Tark-2	8:59A	131	.60*	1.68	.88	.74	81	70		None	None			None	Corn 15" high. Cultivated 28th.	
"	"	1.97	"	"	131	.60*	1.68	.88	.68	81	70	9:06A	9:14	.002	.045	9:09	.009	Corn 13" high. Cultivated 28th.	
"	"	1.97	"	"	131	.60*	1.68	.88	.68	81	70			.003			.001	No hydrograph. No hydrograph.	
"	"	3.25	Plum-2	9:05A	135	.62*	1.20	.72	.64	81	70								
"	"	3.12	Tark-2	8:59A	131	.61	1.68	.88	.74	81	70		None	None	.61		None	No hydrograph.	
7/30/35	Plot V	3.25	Tark-2	11:25P	60	.94	3.12	2.72	1.68	97	69			.005			.005	No hydrograph.	
"	"	1.97	"	"	60	.94	3.12	2.72	1.68	97	69						.005	-do-	
"	"	1.97	"	"	60	.94	3.12	2.72	1.68	97	69			None			None	-do-	
"	"	3.25	Plum-2	11:30P	60	.80	2.64	2.18	1.44	97	69			None			None	-do-	
"	"	3.12	Tark-2	11:25P	60	.94	3.12	2.72	1.68	97	69			-do-			-do-	-do-	
"	"	3.12	Plum-2	11:30P	60	.80	2.64	2.18	1.44	97	69			-do-			-do-	-do-	
7/23/35	Plot V	3.25	Tark-2	7:05P	155	.42	1.80	1.04	.64	99	72		None	None			None	No hydrograph	
"	"	1.97	"	"	155	.42	1.80	1.04	.64	99	72			-do-			.42	Corn 3 1/2 ft. high. Cultivated.	
"	"	1.97	"	"	155	.42	1.80	1.04	.64	99	72			-do-			.42	Corn 4 ft. high. Cultivated.	
"	"	3.25	Plum-2	7:10P	125	.40	1.80	1.04	.64	99	72			-do-			.40		
"	"	3.25	Tark-2	7:05P	155	.42	1.80	1.04	.64	99	72			-do-			.40		
"	"	3.12	Plum-2	7:10P	125	.40	1.80	1.04	.64	99	72			-do-			.40		
8/3/35	Plot V	3.25	Tark-2	5:51P	6	.20	2.00	.80	.40	102	74		None	None			None	No hydrograph	
"	"	1.97	"	"	6	.20	2.00	.80	.40	102	74			-do-			.20	Corn 3 1/2 ft. high. Cultivated.	
"	"	1.97	"	"	6	.20	2.00	.80	.40	102	74			-do-			.20	Corn 4 ft. high. Cultivated.	
"	"	3.25	Plum-2	5:43P	9	.25	2.76	1.00	.50	102	74			-do-			.25		
"	"	3.12	Tark-2	5:51P	6	.20	2.00	.80	.40	102	74			-do-			.25		
"	"	3.12	Plum-2	5:43P	9	.25	2.76	1.00	.50	102	74			-do-			.25		
8/17/35	Plot V	3.25	Tark-2	2:25A	50	1.43	3.72	3.32	2.52	96	75		None	None			None	No hydrograph	
"	"	1.97	"	"	50	1.43	3.72	3.32	2.52	96	75			-do-			1.43	Corn 3 1/2 ft. high. Cultivated.	
"	"	1.97	"	"	50	1.43	3.72	3.32	2.52	96	75			-do-			1.43	Corn 4 ft. high. Cultivated.	
"	"	3.25	Plum-2	2:15A	45	1.28	3.84	3.12	2.28	96	75			-do-			1.28		
"	"	3.12	Tark-2	2:25A	50	1.43	3.72	3.32	2.52	96	75			-do-			1.28		
"	"	3.12	Plum-2	2:15A	45	1.28	3.84	3.12	2.28	96	75			-do-			1.28		

Rainfall computed by using Horton's Method of proportioning rainfall.

*Rainfall computed by using Horton's Method of proportioning rainfall.

UNITED STATES DEPARTMENT OF AGRICULTURE
 SOIL CONSERVATION SERVICE
 DIVISION OF RESEARCH

 MONTH August, September, 1935
 SHEET 6 OF 8 SHEETS

RECORD OF SINGLE STORMS AND THEIR RUN-OFFS ON VARIOUS WATERSHEDS

 PROJECT Clarinda, Iowa

Date	WATERSHED		RAINFALL						TEMPERATURE (degrees F.)		RUN-OFF				RAINFALL MEASUREMENT (inches)	SILT LOSS (tons per acre)	CONDITION OF WATERSHED		
	Number	Area (acres)	Gage No.	Time (hour)	Duration (minutes)	Amount (inches)	MAXIMUM INTENSITY			Maximum	Minimum	Began (hour)	Ended (hour)	Amount (inches)				MAXIMUM RATE	
							8 minutes (inches per hour)	18 minutes (inches per hour)	30 minutes (inches per hour)									Cu ft. sec.	Time
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)		
8/19/20/35	Plot V	3.25	Tark-2	10:00P	50	.28	0.96	0.32	0.26	92	64			None	.28	None			
	"	1.97	"	"	50	.28	.96	.32	.26	92	64			-10-	.28	-10-			
	"	1.97	"	"	50	.28	.96	.32	.26	92	64			-10-	.28	-10-			
	"	3.25	Plum-2	11:40P	120	.26	1.20	.44	.24	92	64			-10-	.26	-10-			
	"		Tark-2	10:00P	50	.28	.96	.32	.26	92	64			-10-	.26	-10-			
8/22/35	"	3.12	Plum-2	11:40P	120	.26	1.20	.44	.24	92	64			-10-	.26	-10-			
	Plot V	3.25	Tark-2	11:45P	115	.50	1.32	.64	.44	80	64			None	.50	None			
	"	1.97	"	"	115	.50	1.32	.64	.44	80	64			-10-	.50	-10-			
	"	1.97	"	11:45P	115	.50	1.32	.64	.44	80	64			-10-	.50	-10-			
	"	3.25	Plum-2	6:35A	115	.53	.60	.56	.44	80	64			-10-	.53	-10-			
8/31/35	"		Tark-2	11:45P	115	.50	1.32	.64	.44	80	64			-10-	.53	-10-			
	"	3.12	Plum-2	6:35A	115	.53	.60	.56	.44	80	64			-10-	.53	-10-			
	Plot V	3.25	Tark-2	10:30P	65	.28	.48	.44	.36	62	54			None	.28	None			
	"	1.97	"	"	65	.28	.48	.44	.36	62	54			-10-	.28	-10-			
	"	1.97	"	"	65	.28	.48	.44	.36	62	54			-10-	.28	-10-			
9/1/35	"	3.25	Plum-2	10:35P	57	.24	.48	.40	.36	62	54			-10-	.24	-10-			
	"		Tark-2	10:30P	65	.28	.48	.44	.36	62	54			-10-	.24	-10-			
	"	3.12	Plum-2	10:35P	57	.24	.48	.40	.36	62	54			-10-	.24	-10-			
	Plot V	3.25	Tark-2	11:00A	370	1.49	.48	.48	.42	59	56			None	1.49	None			
	"	1.97	"	"	370	1.49	.48	.48	.42	59	56			-10-	1.49	-10-			
9/6/35	"	1.97	"	"	370	1.49	.48	.48	.42	59	56			-10-	1.49	-10-			
	"	3.25	Plum-2	4:40A	390	1.69	.72	.52	.44	59	56			-10-	1.69	-10-			
	"		Tark-2	11:00A	370	1.49	.48	.48	.42	59	56			-10-	1.69	-10-			
	"	3.12	Plum-2	4:40A	390	1.69	.72	.52	.44	59	56			-10-	1.69	-10-			
	Plot V	3.25	Tark-2	11:45A	90	.33	.96	.54	.50	66	57			None	.33	None			
9/8/35	"	1.97	"	"	90	.33	.96	.54	.50	66	57			-10-	.33	-10-			
	"	1.97	"	"	90	.33	.96	.54	.50	66	57			-10-	.33	-10-			
	"	3.25	Plum-2	12:20A	45	.28	1.08	.80	.52	66	57			-10-	.28	-10-			
	"		Tark-2	11:45A	90	.33	.96	.54	.50	66	57			-10-	.33	-10-			
	"	3.12	Plum-2	12:20A	45	.28	1.08	.80	.52	66	57			-10-	.28	-10-			
9/8/35	Plot V	3.25	Tark-2	2:37P	118	.45	.48	.24	.18	66	57			None	.45	None			
	"	1.97	"	"	118	.45	.48	.24	.18	66	57			-10-	.45	-10-			
	"	1.97	"	"	118	.45	.48	.24	.18	66	57			-10-	.45	-10-			
	"	3.25	Plum-2	2:18P	122	.47	.72	.36	.24	66	57			-10-	.47	-10-			
	"		Tark-2	2:37P	118	.45	.48	.24	.18	66	57			-10-	.47	-10-			
"	3.12	Plum-2	2:18P	122	.47	.72	.36	.24	66	57			-10-	.47	-10-				

UNITED STATES DEPARTMENT OF AGRICULTURE
 SOIL CONSERVATION SERVICE
 DIVISION OF RESEARCH

 MONTH Sept., Oct., Nov., 1935
 SHEET 7 OF 8 SIKETS

RECORD OF SINGLE STORMS AND THEIR RUN-OFFS ON VARIOUS WATERSHEDS

Project Clarinda, Iowa

Date	Watershed		Rainfall										Temperature		Hyetograph				Rainfall minus loss (inches)	Run Loss (cords per day)	Condition of Watershed
	Number	Area (acres)	Gage No.	Time (hour)	Duration (minutes)	Amount (inches)	Maximum Intensity			Minimum (inches per hour)	Maximum (inches per hour)	Began (hour)	Ended (hour)	Amount (inches)	Maximum Rate		Time				
							5 minutes (inches per hour)	15 minutes (inches per hour)	30 minutes (inches per hour)						Cu. ft.	Time					
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	
9/16/35	Plot V	3.25	Tark. 2	4:20A	55	.51	1.44	1.23	.92	83	67			None				.51	None		
"	"	1.97	"	"	55	.51	1.44	1.28	.92	83	67			-do-				.51	-do-		
"	"	1.97	"	"	55	.51	1.44	1.28	.92	83	67			-do-				.51	-do-		
"	"	3.25	Plum 2	4:05A	35	.53	1.52	1.02	.82	83	67			-do-				.53	-do-		
"	"	3.12	Tark. 2	4:20A	55	.51	1.44	1.28	.92	83	67			-do-				.51	-do-		
"	"	3.12	Plum 2	4:05A	35	.53	1.52	1.02	.82	83	67			-do-				.53	-do-		
9/25/35	Plot V	3.25	Tark. 2	6:30P	625	1.82*	1.20	1.20	.46	77	44			.006				1.81	.001	Corn standing. No hydrograph.	
"	"	1.97	"	"	625	1.82	1.20	1.20	.46	77	44			None				1.82	None		
"	"	1.97	"	"	625	1.82	1.20	1.20	.46	77	44			-do-				1.82	-do-		
"	"	3.25	Plum 2	6:27P	673	1.83*	1.40	1.08	.60	77	44			.008				1.82	.001	Corn standing. No hydrograph.	
"	"	3.12	Tark. 2	6:30P	625	1.82	1.20	1.20	.46	77	44			None				1.82	None		
"	"	3.12	Plum 2	6:27P	673	1.82	1.40	1.08	.60	77	44			-do-				1.82	-do-		
10/16/35	Plot V	3.25	Tark. 2	8:10P	132	.42	.72	.60	.52	79	56			None				.42	None		
"	"	1.97	"	"	132	.42	.72	.60	.52	79	56			-do-				.42	-do-		
"	"	1.97	"	"	132	.42	.72	.60	.52	79	56			-do-				.42	-do-		
"	"	3.25	Plum 2	8:13P	127	.42	.84	.76	.54	79	56			-do-				.42	-do-		
"	"	3.12	Tark. 2	8:10P	132	.42	.72	.60	.52	79	56			-do-				.42	-do-		
"	"	3.12	Plum 2	8:13P	127	.42	.84	.76	.54	79	56			-do-				.42	-do-		
10/17/35	Plot V	3.25	Tark. 2	12:17A	513	.88	.72	.24	.22	58	45			None				.88	None		
"	"	1.97	"	"	513	.88	.72	.24	.22	58	45			-do-				.88	-do-		
"	"	1.97	"	"	513	.88	.72	.24	.22	58	45			-do-				.88	-do-		
"	"	3.25	Plum 2	12:12A	513	.87	.84	.40	.24	53	45			-do-				.87	-do-		
"	"	3.12	Tark. 2	12:17A	513	.88	.72	.24	.22	58	45			-do-				.87	-do-		
"	"	3.12	Plum 2	12:12A	513	.87	.84	.40	.24	58	45			-do-				.87	-do-		
10/31/35	Plot V	3.25	Tark. 2	5:15A	205	1.13*	1.20	.96	.86	37	26			.010				1.12	Trace	Corn standing not picked. No hydrograph.	
"	"	1.97	"	"	205	1.13*	1.20	.96	.86	37	26			.015				1.11	.004	Corn standing not picked. No hydrograph.	
"	"	1.97	"	"	205	1.13*	1.20	.96	.86	37	26			-do-				1.12	.004	Corn standing not picked. No hydrograph.	
"	"	3.25	Plum 2	5:20A	175	.98	1.80	1.12	.76	37	26			None				.98	None		
"	"	3.12	Tark. 2	5:15A	205	1.00	1.20	.96	.86	37	26			-do-				.98	-do-		
"	"	3.12	Plum 2	5:20A	175	.98	1.80	1.12	.76	37	26			-do-				.98	-do-		
11/30/35	Plot V	3.25	Tark. 2	12:20A	255	.50	.72	.33	.20	38	27			None				.50	None		
"	"	1.97	"	"	255	.50	.72	.33	.20	38	27			-do-				.50	-do-		
"	"	1.97	"	"	255	.50	.72	.33	.20	38	27			-do-				.50	-do-		
"	"	3.25	Plum 2	11:45P	173	.48	.84	.56	.40	38	27			None				.48	None		
"	"	3.25	Tark. 2	12:20A	255	.50	.72	.33	.20	38	27			None				.48	-do-		
"	"	3.12	Plum 2	11:45P	173	.48	.84	.56	.40	38	27			None				.48	-do-		

Refer to Nov. 4, 1935 storm

SHEET 8 OF 8 SHEETS

RECORD OF SINGLE STORMS AND THEIR RUN-OFFS ON VARIOUS WATERSHEDS

PROJECT - Clarinda, Iowa

[illegible]

* Total for Nov. 3 & 4, determined by Horton's Method.

May 31, 1935

May 31, 1935

May 31, 1935

May 31, 1935

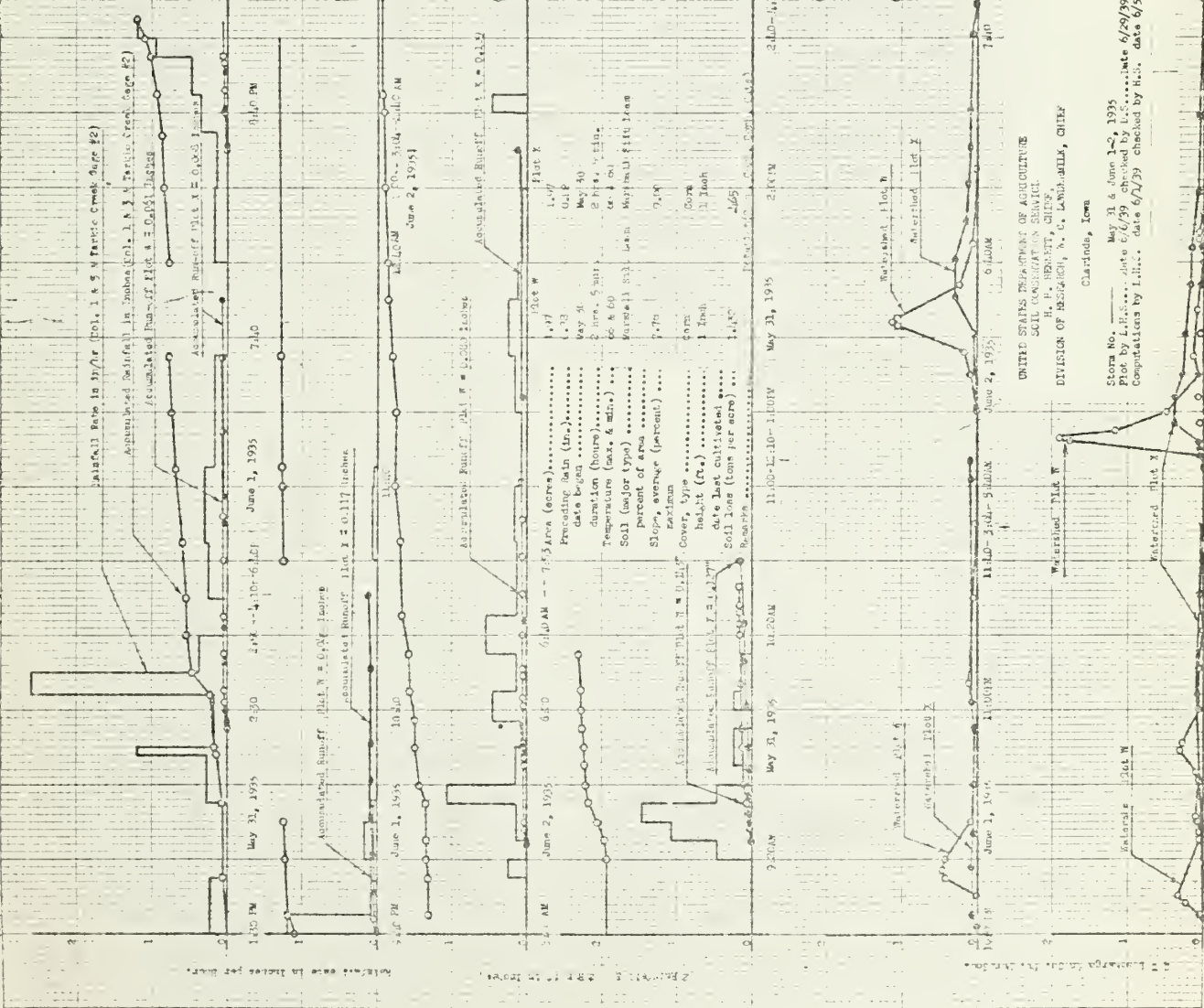
May 31, 1935

May 31, 1935

May 31, 1935

May 31, 1935

May 31, 1935



(1)	(2)	(3)	(4)	(5)	(6)
Time	Date	Water	Water	Water	Water
8:15 A.	May 31	15	16	17	18
8:30	May 31	20	21	22	23
8:45	May 31	25	26	27	28
9:00	May 31	30	31	32	33
9:15	May 31	35	36	37	38
9:30	May 31	40	41	42	43
9:45	May 31	45	46	47	48
10:00	May 31	50	51	52	53
10:15	May 31	55	56	57	58
10:30	May 31	60	61	62	63
10:45	May 31	65	66	67	68
11:00	May 31	70	71	72	73
11:15	May 31	75	76	77	78
11:30	May 31	80	81	82	83
11:45	May 31	85	86	87	88
12:00	May 31	90	91	92	93
12:15	May 31	95	96	97	98
12:30	May 31	100	101	102	103
12:45	May 31	105	106	107	108
1:00	May 31	110	111	112	113
1:15	May 31	115	116	117	118
1:30	May 31	120	121	122	123
1:45	May 31	125	126	127	128
2:00	May 31	130	131	132	133
2:15	May 31	135	136	137	138
2:30	May 31	140	141	142	143
2:45	May 31	145	146	147	148
3:00	May 31	150	151	152	153
3:15	May 31	155	156	157	158
3:30	May 31	160	161	162	163
3:45	May 31	165	166	167	168
4:00	May 31	170	171	172	173
4:15	May 31	175	176	177	178
4:30	May 31	180	181	182	183
4:45	May 31	185	186	187	188
5:00	May 31	190	191	192	193
5:15	May 31	195	196	197	198
5:30	May 31	200	201	202	203
5:45	May 31	205	206	207	208
6:00	May 31	210	211	212	213
6:15	May 31	215	216	217	218
6:30	May 31	220	221	222	223
6:45	May 31	225	226	227	228
7:00	May 31	230	231	232	233
7:15	May 31	235	236	237	238
7:30	May 31	240	241	242	243
7:45	May 31	245	246	247	248
8:00	May 31	250	251	252	253
8:15	May 31	255	256	257	258
8:30	May 31	260	261	262	263
8:45	May 31	265	266	267	268
9:00	May 31	270	271	272	273
9:15	May 31	275	276	277	278
9:30	May 31	280	281	282	283
9:45	May 31	285	286	287	288
10:00	May 31	290	291	292	293
10:15	May 31	295	296	297	298
10:30	May 31	300	301	302	303
10:45	May 31	305	306	307	308
11:00	May 31	310	311	312	313
11:15	May 31	315	316	317	318
11:30	May 31	320	321	322	323
11:45	May 31	325	326	327	328
12:00	May 31	330	331	332	333
12:15	May 31	335	336	337	338
12:30	May 31	340	341	342	343
12:45	May 31	345	346	347	348
1:00	May 31	350	351	352	353
1:15	May 31	355	356	357	358
1:30	May 31	360	361	362	363
1:45	May 31	365	366	367	368
2:00	May 31	370	371	372	373
2:15	May 31	375	376	377	378
2:30	May 31	380	381	382	383
2:45	May 31	385	386	387	388
3:00	May 31	390	391	392	393
3:15	May 31	395	396	397	398
3:30	May 31	400	401	402	403
3:45	May 31	405	406	407	408
4:00	May 31	410	411	412	413
4:15	May 31	415	416	417	418
4:30	May 31	420	421	422	423
4:45	May 31	425	426	427	428
5:00	May 31	430	431	432	433
5:15	May 31	435	436	437	438
5:30	May 31	440	441	442	443
5:45	May 31	445	446	447	448
6:00	May 31	450	451	452	453
6:15	May 31	455	456	457	458
6:30	May 31	460	461	462	463
6:45	May 31	465	466	467	468
7:00	May 31	470	471	472	473
7:15	May 31	475	476	477	478
7:30	May 31	480	481	482	483
7:45	May 31	485	486	487	488
8:00	May 31	490	491	492	493
8:15	May 31	495	496	497	498
8:30	May 31	500	501	502	503
8:45	May 31	505	506	507	508
9:00	May 31	510	511	512	513
9:15	May 31	515	516	517	518
9:30	May 31	520	521	522	523
9:45	May 31	525	526	527	528
10:00	May 31	530	531	532	533
10:15	May 31	535	536	537	538
10:30	May 31	540	541	542	543
10:45	May 31	545	546	547	548
11:00	May 31	550	551	552	553
11:15	May 31	555	556	557	558
11:30	May 31	560	561	562	563
11:45	May 31	565	566	567	568
12:00	May 31	570	571	572	573
12:15	May 31	575	576	577	578
12:30	May 31	580	581	582	583
12:45	May 31	585	586	587	588
1:00	May 31	590	591	592	593
1:15	May 31	595	596	597	598
1:30	May 31	600	601	602	603
1:45	May 31	605	606	607	608
2:00	May 31	610	611	612	613
2:15	May 31	615	616	617	618
2:30	May 31	620	621	622	623
2:45	May 31	625	626	627	628
3:00	May 31	630	631	632	633
3:15	May 31	635	636	637	638
3:30	May 31	640	641	642	643
3:45	May 31	645	646	647	648
4:00	May 31	650	651	652	653
4:15	May 31	655	656	657	658
4:30	May 31	660	661	662	663
4:45	May 31	665	666	667	668
5:00	May 31	670	671	672	673
5:15	May 31	675	676	677	678
5:30	May 31	680	681	682	683
5:45	May 31	685	686	687	688
6:00	May 31	690	691	692	693
6:15	May 31	695	696	697	698
6:30	May 31	700	701	702	703
6:45	May 31	705	706	707	708
7:00	May 31	710	711	712	713
7:15	May 31	715	716	717	718
7:30	May 31	720	721	722	723
7:45	May 31	725	726	727	728
8:00	May 31	730	731	732	733
8:15	May 31	735	736	737	738
8:30	May 31	740	741	742	743
8:45	May 31	745	746	747	748
9:00	May 31	750	751	752	753
9:15	May 31	755	756	757	758
9:30	May 31	760	761	762	763
9:45	May 31	765	766	767	768
10:00	May 31	770	771	772	773
10:15	May 31	775	776	777	778
10:30	May 31	780	781	782	783
10:45	May 31	785	786	787	788
11:00	May 31	790	791	792	793
11:15	May 31	795	796	797	798
11:30	May 31	800	801	802	803
11:45	May 31	805	806	807	808
12:00	May 31	810	811	812	813
12:15	May 31	815	816	817	818
12:30	May 31	820	821	822	823
12:45	May 31	825	826	827	828
1:00	May 31	830	831	832	833
1:15	May 31	835	836	837	838
1:30	May 31	840	841	842	843
1:45	May 31	845	846	847	848
2:00	May 31	850	851	852	853
2:15	May 31	855	856	857	858
2:30	May 31	860	861	862	863
2:45	May 31	865	866	867	868
3:00	May 31	870	871	872	873
3:15	May 31	875	876	877	878
3:30	May 31	880	881	882	883
3:45	May 31	885	886	887	888
4:00	May 31	890	891	892	893
4:15	May 31	895	896	897	898
4:30	May 31	900	901	902	903
4:45	May 31	905	906	907	908
5:00	May 31	910	911	912	913
5:15	May 31	915	916	917	918
5:30	May 31	920	921	922	923
5:45	May 31	925	926	927	928
6:00	May 31	930	931	932	933
6:15	May 31	935	936	937	938
6:30	May 31	940	941	942	943
6:45	May 31	945	946	947	948
7:00	May 31	950	951	952	953
7:15	May 31	955	956	957	958
7:30	May 31	960	961	962	963
7:45	May 31	965	966	967	968
8:00	May 31	970	971	972	973
8:15	May 31	975	976	977	978
8:30	May 31	980	981	982	983
8:45	May 31	985	986	987	988
9:00	May 31	990	991	992	993
9:15	May 31	995	996	997	998
9:30	May 31	1000	1001	1002	1003
9:45	May 31	1005	1006	1007	1008
10:00	May 31	1010	1011	1012	1013
10:15	May 31	1015	1016	1017	1018
10:30	May 31	1020	1021	1022	1023
10:45	May 31	1025	1026	1027	1028
11:00	May 31	1030	1031	1032	1033
11:15	May 31	1035	1036	1037	1038
11:30	May 31	1040	1041	1042	1043</

June 6, 1935
 Clarinda, Iowa
 Vegetated Plot N

(1)	(2)	(3)	(4)	(5)	(6)
Time	At	At	At	At	At
(min)	(min)	(min)	(min)	(min)	(min)
10	10	10	10	10	10
15	15	15	15	15	15
20	20	20	20	20	20
25	25	25	25	25	25
30	30	30	30	30	30
35	35	35	35	35	35
40	40	40	40	40	40
45	45	45	45	45	45
50	50	50	50	50	50

• Precipitation in Watershed Plot N determined by Horton's Balance.

Plot N

Bedfall Face to/or (Col. 1 & 2) N. Tarble Creek (Map 83)

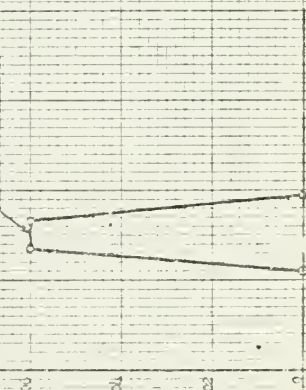
Estimated Run-off Plot N = 0.06

Estimated Run-off Plot N = 0.06

Plot N

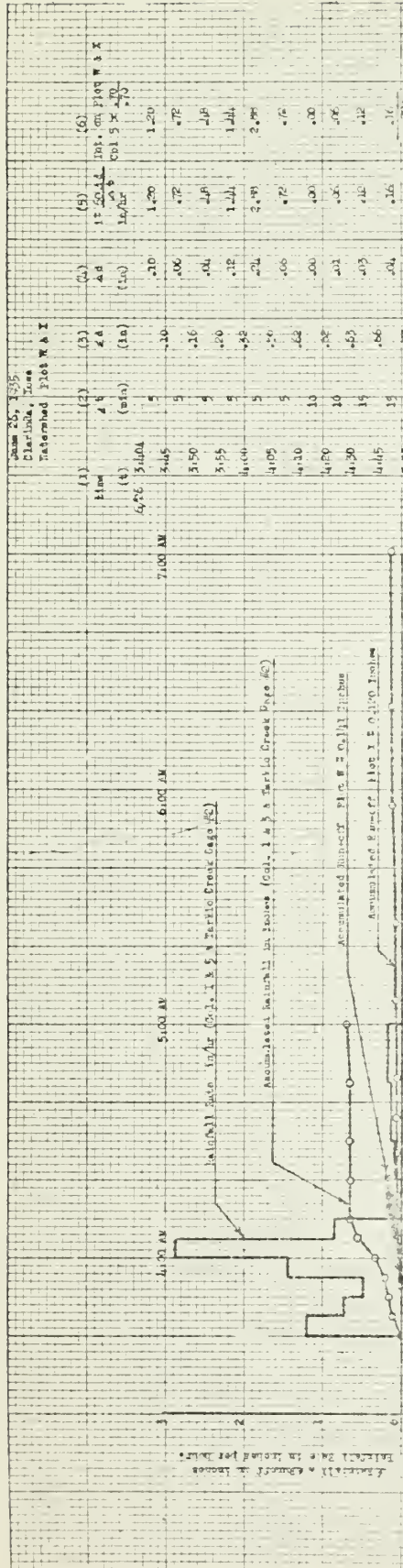
Area covered by vegetation (sq. ft.)
 Area covered by water (sq. ft.)
 Area covered by bare soil (sq. ft.)
 Area covered by rocks (sq. ft.)
 Area covered by other (sq. ft.)
 Total area (sq. ft.)
 Area covered by vegetation (sq. ft.)
 Area covered by water (sq. ft.)
 Area covered by bare soil (sq. ft.)
 Area covered by rocks (sq. ft.)
 Area covered by other (sq. ft.)
 Total area (sq. ft.)

Estimated Plot N

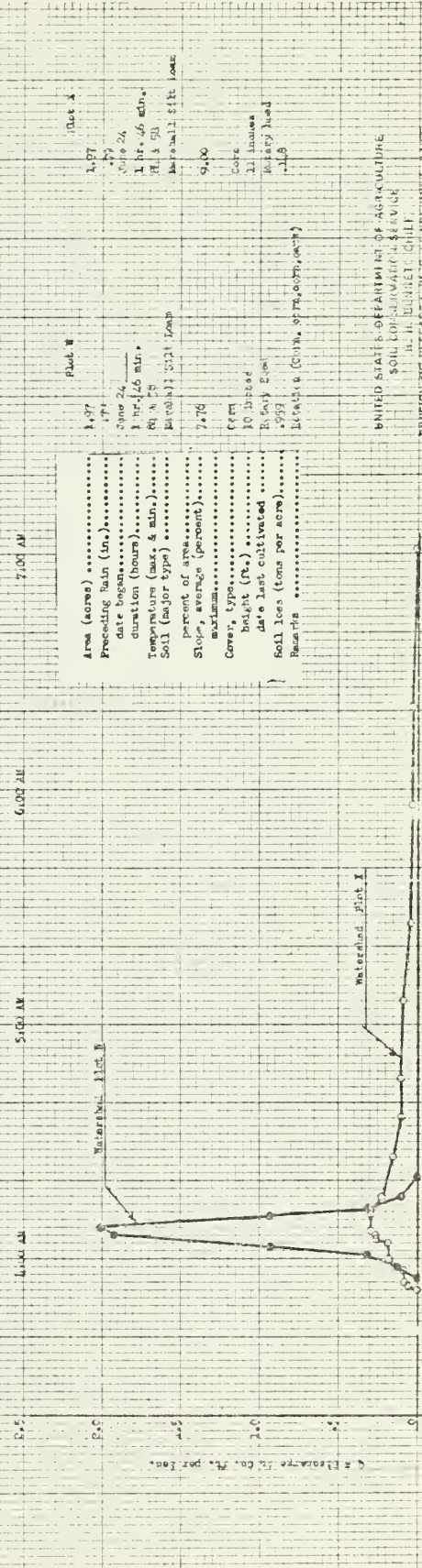


UNITED STATES DEPARTMENT OF AGRICULTURE
 SOIL CONSERVATION SERVICE
 H. H. HENNING, CHIEF
 DIVISION OF AGRICULTURAL MECHANICS
 Clarinda, Iowa

STORM NO. 1, June 6, 1935
 Plot N, June 6, 1935
 Comp. from 0.06 to 0.06
 Sheet 1 of 1 sheet



* Irradiation on Watershed Plot W & X determined by Horton's Method



UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
H. H. BENNETT, CHIEF
DIVISION OF RESEARCH IN C. LEONARDIMIER, JR.

Clarinda, Iowa

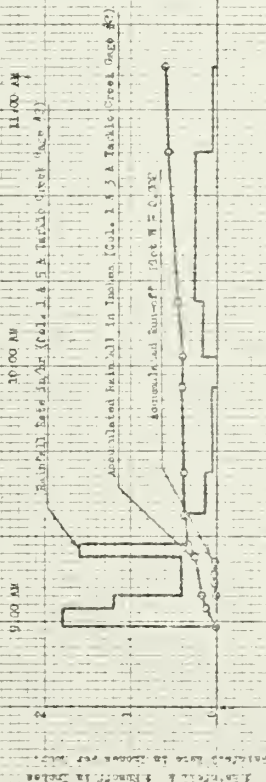
STORM NO. 12 June 26, 1935
Wind direction, S.W. 10-15 mph. 1 hr. 46 min.
Temperature (max. & min.) 81 & 58
Soil (major type) 100% 1st 100%
Percent of area.....
Soil, average (percent).....
Cover, type.....
Height (ft.).....
Soil loss (tons per acre).....
Remarks (Storm, 9174, 100% each)

Short 2 of 3 sheets

June 30, 1935
Clarinda, Iowa
Wheatfield Plot

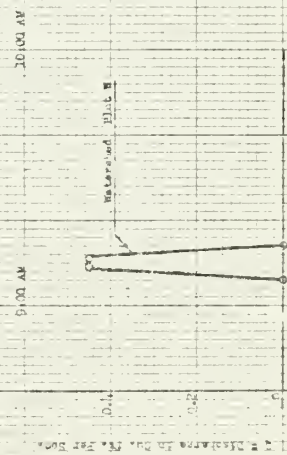
(1)	(2)	(3)	(4)	(5)
min	Δ	Δ	Δ	Δ
(s)	(min)	(in)	(in)	(in)
31.20	4	.12	1.80	1.80
31.63	5	.12	1.20	1.20
31.06	9	.16	.40	.40
31.15	5	.06	1.05	1.05
31.18	7	.12	.04	.04
31.25	10	.02	.12	.12
31.34	20	.06	.06	.06
31.53	7	.10	.00	.00
31.62	13	.10	.19	.19
31.73	15	.14	.24	.24
31.80	20	.02	.00	.00
31.90	10	.10	—	—

recipitation, on Katarzelski W determined by Horton's method.



New York, N. Y.

Mean (meters)	1.97
Translating field (m.)	1.79
date begun	June 26
date finished	1 yr. 10 mos.
Temperature (max. & min.)	81 & 70
Wind (direction & velocity)	Marshall's salt down
Percent of mud	
Slime (white & blue)	1.70
Boiler No.	
Quartz (%)	5.02
Acidity (H ⁺ ions)	25 inches
date and place	Estimated July 28
total acid from the trial	.059
date and place	Abolition (Cory, Conn)

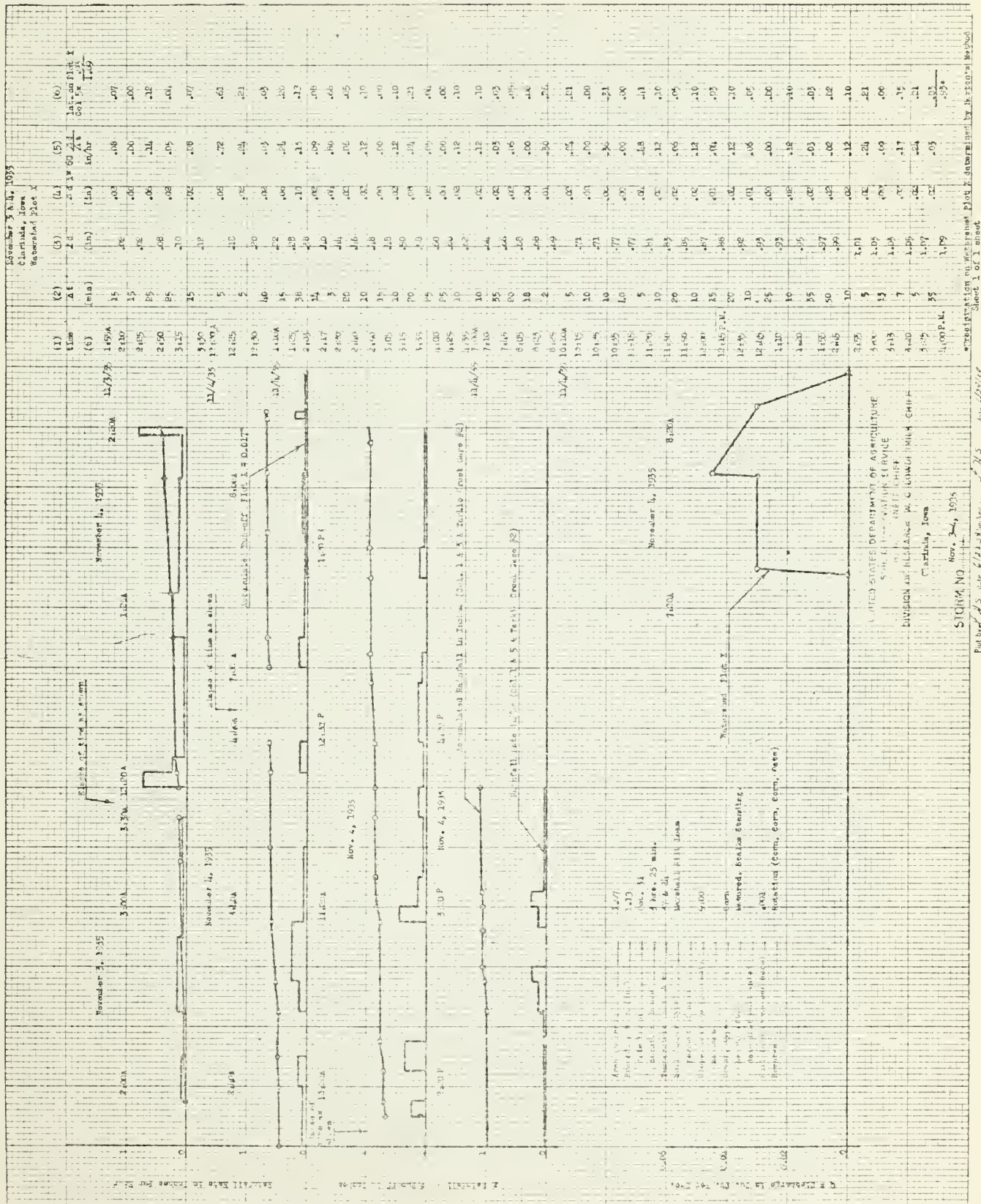


UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
H. H. BENNETT, CHIEF
DIVISION OF RESEARCH W. C. LOWDERMILK, CHIEF

Clarinda Town

STORM NO. 10, 1935

Not type of H.S. state table, as instructions for page 8
Computations by W.S. due 8/25/58 instead by W.S. due 8/26/58
sheet 1 of 1 sheet



Plot by λ of S_{λ} . date 6/23/89 file name 245 date 6/23/89
 Computations by λ S_{λ} date 6/5/89 file name 245 date 6/7/89.

1936

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
DIVISION OF RESEARCH

MONTH April, May, 1936

SHEET 1 OF 5 SHEETS

Project Clayton, Iowa

RECORD OF SINGLE STORMS AND THEIR RUN-OFFS ON VARIOUS WATERSHEDS

[illegible]

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
DIVISION OF RESEARCH

Project Clarinda, Iowa

RECORD OF SINGLE STORMS AND THEIR RUN-OFFS ON VARIOUS WATERSHEDS

MONTH May, June, 19 36
SHEET 2 OF 5 SHEETS

Date	WATERSHED					RAINFALL										TEMPERATURE			RUN-OFF					RAINFALL MEAN		Silt Load (tons per acre)	Comments or Watershed
	Number	Area (acres)	Gage No.	Begin (hour)	Duration (minutes)	Amount (inches)	Maximum Intensity			Maximum	Minimum	Basin (sq. mi.)	Outlet (sq. ft.)	Amount (inches)	Maximum Rate		Rainfall Mean (inches)	Silt Load									
							1 minute (inches per hour)	15 minutes (inches per hour)	30 minutes (inches per hour)						Cu ft. sec.	Time											
5/9/36	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)								
"	Plot V	3.25	Mark 2	3:26A	99	.55	1.32	.84	.62	74	58	Refer to 5/9/36 storm															
"	W	1.97	"	"	99	.55	1.32	.84	.62	74	58	Refer to 5/9/36 storm															
"	X	1.97	"	"	99	.55	1.32	.84	.62	74	58	Refer to 5/9/36 storm															
"	Y	3.25	Plum 2	3:18A	102	.59	1.56	.96	.60	74	58	Refer to 5/9/36 storm															
"	Z	3.12	Plum 2	3:18A	102	.59	1.56	.96	.60	74	58	Refer to 5/9/36 storm															
5/9/36	Plot V	3.25	Mark 2	11:09A	171	.37	1.39	.60	.34	74	58	Refer to 5/9/36 storm															
"	W	1.97	"	"	"	.37	"	"	"	74	58	Refer to 5/9/36 storm															
"	X	1.97	"	"	"	.37	"	"	"	74	58	Refer to 5/9/36 storm															
"	Y	3.25	Plum 2	12:10P	75	.24	1.05	.36	.24	74	58	Refer to 5/9/36 storm															
"	Z	3.12	Plum 2	12:10P	75	.24	1.05	.36	.24	74	58	Refer to 5/9/36 storm															
5/9/36	Plot V	3.25	Mark 2	3:55P	79	.20	2.04	.88	.44	74	58	3:50P 4:30		0.005	0.053	4:10	2.19	0.004	No crop. Plowed for corn								
"	W	1.97	"	"	79	.20	2.04	.88	.44	74	58			.008			2.19	.002	No hydrograph.								
"	X	1.97	"	"	79	.20	2.04	.88	.44	74	58			None			2.20	None	No hydrograph								
"	Y	3.25	Plum 2	3:55P	79	.20	2.04	.88	.44	74	58			.063			2.09	.063	No hydrograph								
"	Z	3.12	Plum 2	3:55P	60	.20	2.28	.96	.50	74	58			None			2.15	None									
5/12/36	Plot V	3.25	Mark 2	4:35A	165	.29	.60	.40	.38	70	57			None			.29	None									
"	W	1.97	"	"	165	.29	.60	.40	.38	70	57			-do-			.29	-do-									
"	X	1.97	"	"	165	.29	.60	.40	.38	70	57			-do-			.29	-do-									
"	Y	3.25	Plum 2	4:35A	157	.29	.60	.40	.38	70	57			-do-			.29	-do-									
"	Z	3.12	Plum 2	4:35A	157	.29	.60	.40	.38	70	57			-do-			.29	-do-									
6/5/36	Plot V	3.25	Mark 2	12:10P	145	.32	.96	.44	.30	73	62	Refer to 6/5/36 storm					.32	None									
"	W	1.97	"	"	145	.32	.96	.44	.30	73	62	Refer to 6/5/36 storm					.32	-do-									
"	X	1.97	"	"	145	.32	.96	.44	.30	73	62	Refer to 6/5/36 storm					.32	-do-									
"	Y	3.25	Plum 2	12:10P	145	.32	.96	.44	.30	73	62	Refer to 6/5/36 storm					.32	-do-									
"	Z	3.12	Plum 2	12:10P	145	.32	.96	.44	.30	73	62	Refer to 6/5/36 storm					.32	-do-									
6/5/36	Plot V	3.25	Mark 2	6:15P	255	.77	3.12	1.60	1.18	73	62						.77	Trace	No hydrograph								
"	W	1.97	"	"	255	.77	3.12	1.60	1.18	73	62						.77	Trace	No hydrograph								
"	X	1.97	"	"	255	.77	3.12	1.60	1.18	73	62						.77	Trace	No hydrograph								
"	Y	3.25	Plum 2	6:15P	70	.77	3.12	1.60	1.18	73	62						.77	Trace	No hydrograph								
"	Z	3.12	Plum 2	6:15P	70	.77	3.12	1.60	1.18	73	62						.77	Trace	No hydrograph								
6/9/36	Plot V	3.25	Mark 2	9:35A	140	.59	1.44	1.16	1.04	87	59						.59	Trace	No hydrograph								
"	W	1.97	"	"	140	.59	1.44	1.16	1.04	87	59						.59	Trace	No hydrograph								
"	X	1.97	"	"	140	.59	1.44	1.16	1.04	87	59						.59	Trace	No hydrograph								
"	Y	3.25	Plum 2	9:24A	36	.57	1.44	1.08	.96	87	59						.57	Trace	No hydrograph								
"	Z	3.12	Plum 2	9:24A	36	.57	1.44	1.08	.96	87	59						.57	Trace	No hydrograph								
"	2	3.12	Plum 2	9:24A	36	.54	1.08	1.08	.96	87	59						.54	Trace	No hydrograph								

*Total rainfall for Nov. 8-9, 1936

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
DIVISION OF RESEARCH

Project Clarinda, Iowa

RECORD OF SINGLE STORMS AND THEIR RUN-OFFS ON VARIOUS WATERSHEDS

June, July
North August, September, 1936
Sheet 3 of 5 sheets

Date	Watershed			Rainfall										Temperature (temp. F.)			Run-off				Baromet. Height (inches)		Dry Load (tons per acre)		Comments or Remarks
	Number	Area (acres)	Open No.	Basin (feet)	Duration (hours)	Amount (inches)	Maximum Intensity				Maximum	Minimum	Basin (feet)	Road (feet)	Amount (inches)	Maximum Rate		Baromet. Height (inches)	Dry Load (tons per acre)						
							5 minutes (inches per hour)									15 minutes (inches per hour)	30 minutes (inches per hour)			No. of runs					
							(1)	(2)	(3)	(4)											(5)	(6)	(7)	(8)		(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
6/30/36	Plot V	3.25	Tark 2	1:25A	52	.21	0.96	0.68	0.38	89	69			None				0.21	None						
"	" W	1.97	"	"	52	.21	.96	.68	.38	89	69			-do-				.21	-do-						
"	" X	1.97	"	"	52	.21	.96	.68	.38	89	69			-do-				.21	-do-						
"	" Y	3.25	Plum 2	1:22A	48	.30	1.56	.92	.51	89	69			-do-				.30	-do-						
"	" Z	3.12	Plum 2	1:22A	48	.30	1.56	.92	.51	89	69			-do-				.30	-do-						
7/19/36	Plot V	3.25	Tark 2	7:40P	80	.84	3.48	2.24	1.40	103	66			None				.84	None						
"	" W	1.97	"	"	80	.84	3.48	2.24	1.40	103	66			-do-				.84	-do-						
"	" X	1.97	"	"	80	.84	3.48	2.24	1.40	103	66			-do-				.84	-do-						
"	" Y	3.25	Plum 2	7:35P	70	.74	3.12	2.08	1.28	103	66			-do-				.70	-do-						
"	" Z	3.12	Plum 2	7:35P	70	.74	3.12	2.08	1.28	103	66			-do-				.70	-do-						
8/19/36	Plot V	3.25	Tark 2	5:55P	170	.25	.72	.48	.24	103	70			None				.25	None						
"	" W	1.97	"	"	170	.25	.72	.48	.24	103	70			-do-				.25	-do-						
"	" X	1.97	"	"	170	.25	.72	.48	.24	103	70			-do-				.25	-do-						
"	" Y	3.25	Plum 2	5:34P	166	.36	1.56	.80	.40	103	70			-do-				.36	-do-						
"	" Z	3.12	Plum 2	5:34P	166	.36	1.56	.80	.40	103	70			-do-				.36	-do-						
8/28/36	Plot V	3.25	Tark 2	12:30A	85	.31	.72	.48	.38	84	58			None				.31	None						
"	" W	1.97	"	"	85	.31	.72	.48	.38	84	58			-do-				.31	-do-						
"	" X	1.97	"	"	85	.31	.72	.48	.38	84	58			-do-				.31	-do-						
"	" Y	3.25	Plum 2	12:35A	85	.25	.72	.36	.30	84	58			-do-				.25	-do-						
"	" Z	3.12	Plum 2	12:35A	86	.25	.72	.36	.30	84	58			-do-				.25	-do-						
9/4/36	Plot V	3.25	Tark 2	10:30A	80	.31	1.20	.56	.34	83	67			None				.31	None						
"	" W	1.97	"	"	80	.31	1.20	.56	.34	83	67			-do-				.31	-do-						
"	" X	1.97	"	"	80	.31	1.20	.56	.34	83	67			-do-				.31	-do-						
"	" Y	3.25	Plum 2	10:30A	93	.30	.96	.44	.28	83	67			-do-				.30	-do-						
"	" Z	3.12	Plum 2	10:30A	93	.30	.96	.44	.28	83	67			-do-				.30	-do-						
9/4/36	Plot V	3.25	Tark 2	3:17P	393	1.83	2.88	1.88	1.06	83	67			None				1.83	None						
"	" W	1.97	"	"	393	1.83	2.88	1.88	1.06	83	67			-do-				1.83	-do-						
"	" X	1.97	"	"	393	1.83	2.88	1.88	1.06	83	67			-do-				1.83	-do-						
"	" Y	3.25	Plum 2	3:17P	393	1.83	2.88	1.88	1.06	83	67			-do-				1.83	-do-						
"	" Z	3.12	Plum 2	3:15P	387	1.88	2.84	1.96	1.10	83	67			-do-				1.88	-do-						

UNITED STATES DEPARTMENT OF AGRICULTURE
 SOIL CONSERVATION SERVICE
 DIVISION OF RESEARCH

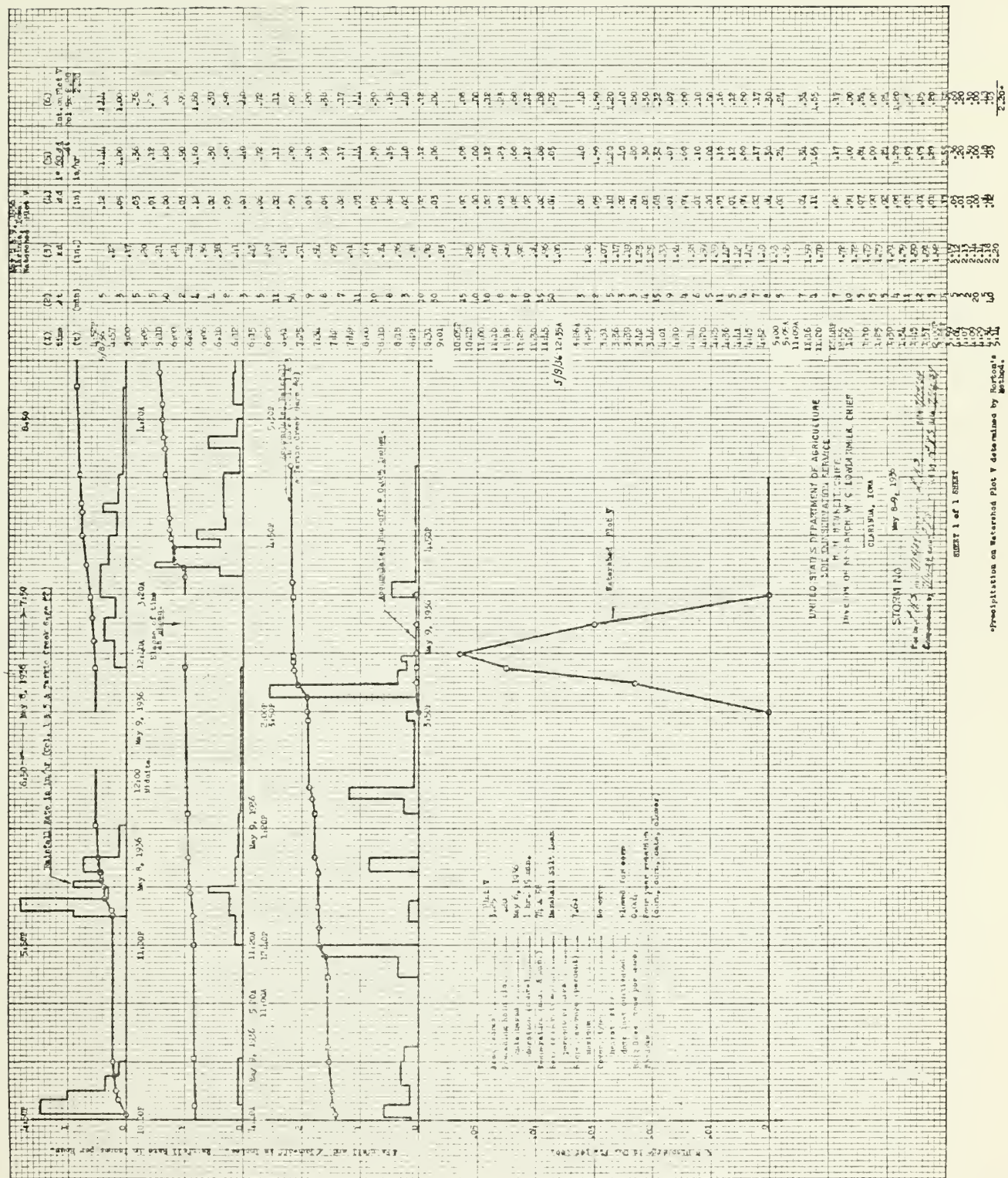
RECORD OF SINGLE STORMS AND THEIR RUN-OFFS ON VARIOUS WATERSHEDS

 PROJECT Clarinda, Iowa

 MONTH September, 19 36
 SHEET 4 OF 5 SHEETS

DATE	WATERSHED	Number	Area (acres)	Open No.	Began (hour)	Duration (minutes)	Amount (inches)	MAXIMUM EXCESS					TOTALS		RUN-OFF				RAPIDITY, MINORS (inches)	RITZ LOSS (ton per acre)	CONTOUR OF WATERSHED
								8 minutes (inches per hour)	15 minutes (inches per hour)	30 minutes (inches per hour)	Maximum	Minimum	Began (hour)	Ended (hour)	Amount (inches)	MAXIMUM RATE					
																Cu ft. sec.	Time				
9/11/36	Plot V	W	3.25	Mark 2	5:01P	209	.10	1.08	0.52	.38	.98	.66				None			0.10	None	
"	"	W	1.97	"	"	209	.10	1.08	.52	.38	.98	.66				-d0-			.10	-d0-	
"	"	X	1.97	"	"	209	.10	1.08	.52	.38	.98	.66				-d0-			.10	-d0-	
"	"	Y	3.25	Plum 2	4:41P	209	.30	.72	.10	.22	.98	.66				-d0-			.30	-d0-	
"	"	Z	3.12	Mark 2	5:01P	209	.30	1.08	.52	.38	.98	.66				-d0-			.30	-d0-	
9/11/36	Plot V	W	3.25	Mark 2	9:10P	60	.39	1.08	.72	.58	.98	.66				None			.39	None	
"	"	W	1.97	"	"	60	.39	1.08	.72	.58	.98	.66				-d0-			.39	-d0-	
"	"	X	1.97	"	"	60	.39	1.08	.72	.58	.98	.66				-d0-			.39	-d0-	
"	"	Y	3.25	Plum 2	9:10P	60	.39	1.08	.72	.58	.98	.66				-d0-			.31	-d0-	
"	"	Z	3.12	Plum 2	9:13P	65	.31	1.08	.60	.50	.98	.66				-d0-			.31	-d0-	
9/12/36	Plot V	W	3.25	Mark 2	8:05A	175	.34	.36	.28	.24	.74	.68				None			.34	None	
"	"	W	1.97	"	"	175	.34	.36	.28	.24	.74	.68				-d0-			.34	-d0-	
"	"	X	1.97	"	"	175	.34	.36	.28	.24	.74	.68				-d0-			.34	-d0-	
"	"	Y	3.25	Plum 2	7:50A	185	.39	.36	.24	.22	.74	.68				-d0-			.39	-d0-	
"	"	Z	3.12	Plum 2	7:50A	185	.39	.36	.24	.22	.74	.68				-d0-			.39	-d0-	
9/12/36	Plot V	W	3.25	Mark 2	5:10P	107	.37	1.32	.92	.58	.74	.68				None			.37	None	
"	"	W	1.97	"	"	107	.37	1.32	.92	.58	.74	.68				-d0-			.37	-d0-	
"	"	X	1.97	"	"	107	.37	1.32	.92	.58	.74	.68				-d0-			.37	-d0-	
"	"	Y	3.25	Plum 2	4:50A	104	.38	1.08	.84	.52	.74	.68				-d0-			.38	-d0-	
"	"	Z	3.12	Plum 2	4:50A	104	.38	1.08	.84	.52	.74	.68				-d0-			.38	-d0-	
9/15/36	Plot V	W	3.25	Mark 2	6:15P	55	.24	1.92	.80	.10	.79	.56				None			.24	None	
"	"	W	1.97	"	"	55	.24	1.92	.80	.10	.79	.56				-d0-			.24	-d0-	
"	"	X	1.97	"	"	55	.24	1.92	.80	.10	.79	.56				-d0-			.24	-d0-	
"	"	Y	3.25	Plum 2	6:01P	75	.25	1.68	.76	.38	.79	.56				-d0-			.25	-d0-	
"	"	Z	3.12	Plum 2	6:01P	75	.25	1.68	.76	.38	.79	.56				-d0-			.25	-d0-	
9/24/36	Plot V	W	3.25	Mark 2	3:30A	800	1.52	.18	.14	.38	.60	.16				None			1.52	None	
"	"	W	1.97	"	"	800	1.52	.18	.14	.38	.60	.16				-d0-			1.52	-d0-	
"	"	X	1.97	"	"	800	1.52	.18	.14	.38	.60	.16				-d0-			1.52	-d0-	
"	"	Y	3.25	Plum 2	3:31A	800	1.18	.60	.36	.38	.60	.16				-d0-			1.18	-d0-	
"	"	Z	3.12	Plum 2	3:31A	610	1.18	.60	.36	.38	.60	.16				-d0-			1.18	-d0-	

May 8 & 9, 1936
Watershed Plot V



UNIVERSITY OF CALIFORNIA
DIVISION OF AGRICULTURE
WATER RESOURCES CENTER
RIVERSIDE, CALIFORNIA

Sheet 1 of 1 Sheet

For May 8, 1936
Computation of Watershed Plot V

May 8, 1936

May 9, 1936

May 10, 1936

May 11, 1936

May 12, 1936

May 13, 1936

May 14, 1936

May 15, 1936

May 16, 1936

May 17, 1936

May 18, 1936

May 19, 1936

May 20, 1936

May 21, 1936

May 22, 1936

May 23, 1936

May 24, 1936

May 25, 1936

May 26, 1936

May 27, 1936

May 28, 1936

May 29, 1936

May 30, 1936

May 31, 1936

June 1, 1936

June 2, 1936

June 3, 1936

June 4, 1936

June 5, 1936

1937

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
DIVISION OF RESEARCH

RECORD OF SINGLE STORMS AND THEIR RUN-OFFS ON VARIOUS WATERSHEDS

MONTH April, 19 37
SHEET 2 OF 8 SHEETS

PROJECT Clarinda, Iowa

DATE	WATERSHED Number	Area (acres)	RAINFALL										TEMPERATURE (degrees F.)		WIND-SPEED				RAINFALL MEASURED (inches)	RPT LOSS (cents per acre)	CONDITION OF WATERSHED
			S. No.	Point (county)	Duration (minutes)	Amount (inches)	MAXIMUM INTENSITY			Maximum (inches per hour)	Minimum	Beard (hour)	Ended (hour)	Amount (inches)	MAXIMUM RATE		RAINFALL MEASURED (inches)	RPT LOSS (cents per acre)			
							15 minutes (inches per hour)	30 minutes (inches per hour)	60 minutes (inches per hour)						CU FT. SEC.	TIME					
4/20/37	Plot Y	3.25	Tark.2	4:15A	265	.42	.48	.40	.32	64	47				None			0.42	None		
"	" W	1.97	Tark.2	4:10A	265	.42	.48	.40	.32	64	47				None			.42	None		
"	" X	1.97	do-	do-	265	.42	.48	.40	.32	64	47				None			.42	None		
"	" Y	3.25	Tark.1	4:140A	265	.50	1.64	.64	.36	64	47				None			.43	None		
"	"		Plot 2	4:140A	275	.43	.60	.48	.32	64	47				None						
"	"		Plot 2	4:140A	265	.42	.48	.40	.32	64	47				None						
"	"		Plot 1	4:140A	265	.50	1.68	.64	.36	64	47				None						
"	" Z	3.12	Plot 1	4:140A	275	.43	1.68	.64	.36	64	47				None			.43	None		
"	"		Plot 2	4:140A	265	.50	1.68	.64	.36	64	47				None						
4/20/37	Plot Y	3.25	Tark.2	2:16P	129	.70	2.64	1.32	1.08	64	47				None			.70	None		
"	" W	1.97	do-	do-	129	.70	2.64	1.32	1.08	64	47				None			.70	None		
"	" X	1.97	do-	do-	129	.70	2.64	1.32	1.08	64	47				None			.70	None		
"	" Y	3.25	Tark.1	2:10P	50	.54	2.28	1.00	.96	64	47				None						
"	"		Plot 2	2:10P	132	.66	2.16	1.28	.84	64	47				None			.66	None		
"	"		Plot 2	2:16P	129	.70	2.64	1.32	1.08	64	47				None						
"	"		Tark.2	2:10P	50	.54	2.28	1.00	.96	64	47				None						
"	" Z	3.12	Plot 1	2:10P	132	.66	2.16	1.28	.84	64	47				None			.66	None		
"	"		Tark.1	2:10P	90	.54	2.28	1.00	.96	64	47				None						
4/24/37	Plot Y	3.25	Tark.2	6:13A	59	.45	2.16	.92	.76	40	31				None			.45	None		
"	" W	1.97	do-	do-	59	.45	2.16	.92	.76	40	31				None			.45	None		
"	" X	1.97	do-	do-	59	.45	2.16	.92	.76	40	31				None			.45	None		
"	"		Tark.1	6:143A	41	.48	2.16	1.00	.84	40	31				None						
"	" Y	3.25	Plot 2	6:143A	57	.48	2.16	.92	.76	40	31				None			.48	None		
"	"		Tark.2	6:143A	59	.45	2.16	.92	.76	40	31				None						
"	"		Tark.1	6:143A	41	.48	2.16	1.00	.84	40	31				None						
"	"		Plot 2	6:143A	57	.48	2.16	.92	.76	40	31				None						
"	" Z	3.12	Tark.1	6:143A	57	.46	2.16	1.00	.84	40	31				None			.48	None		
"	"		Tark.1	6:143A	41	.46	2.16	1.00	.84	40	31				None						
5/37	Plot Y	3.25	Tark.2	11:00P	600	.23	Not operating properly				40	31				None		.23	None		
"	" W	1.97	do-	do-	600	.23	do-				40	31				None		.23	None		
"	" X	1.97	do-	do-	600	.24	do-				40	31				None		.23	None		
"	"		Tark.1	10:55P	605	.24	2.04	.96	.84	40	31				None						
"	" Y	3.25	Plot 2	11:15P	585	.22	2.16	1.00	.84	40	31				None			.22	None		
"	"		Tark.2	11:00P	600	.23	do-				40	31				None					
"	"		Plot 1	10:45P	605	.24	2.04	.96	.84	40	31				None						
"	"		Plot 2	11:15P	585	.22	2.16	1.00	.84	40	31				None						
"	" Z	3.12	Plot 1	10:55P	605	.24	2.04	.96	.84	40	31				None			.22	None		
"	"		Tark.1	10:55P	605	.24	2.04	.96	.84	40	31				None						

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
DIVISION OF RESEARCHProject Clarinda, Iowa

RECORD OF SINGLE STORMS AND THEIR RUN-OFFS ON VARIOUS WATERSHEDS

MONTH May, 19 37
SHEET 3 OF 8 SHEETS

N. C. SOIL CONSERVATION SERVICE 3-17-35

DATE	WATERSHED			RAINFALL						TEMPERATURES (degrees F.)			RICHNESS			RAINFALL MEAS.		COND. OF WATERSHED			
	Number	Area (acres)	Gage No.	Range (inches)	Duration (minutes)	Amount (inches)	8 minutes (inches per hour)	15 minutes (inches per hour)	30 minutes (inches per hour)	Maximum	Minimum	Mean	Beard (inches)	Endel (inches)	Amount (inches)	Max. Rate Cu. ft. sec.	Time		RAINFALL MEAS. (inches)	Rat. Loss (tons per acre)	
5/2/37	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)		
5/2/37	Plot V	3.25	Tark.2	12:26P	204	.26	.12	.12	.10	60	50							0.26	None	(Ground moist) Oats 2-1/2" high. Clover up. / Plowed. No Crop. Ground moist Plowed Harrowed. Ground. moist	
	" W	1.57	"	"	204	.26	.12	.12	.10	60	50							.26	"		
	" X	1.57	"	"	204	.26	.12	.12	.10	60	50							.26	"		
	" Y	3.25	Tark.1	12:15P	170	.22	.12	.12	.12	60	50							.24	"		
	"		Plum.2	12:15P	180	.24	.12	.12	.10	60	50								"		
	"		Tark.2	12:26P	204	.26	.12	.12	.12	60	50										"
5/2/37	" Z	3.12	Tark.1	12:15P	170	.22	.12	.12	.12	60	50							.24	"	(Ground moist) Oats 2-1/2" high. Clover up. / Plowed. No Crop. Ground moist Plowed Harrowed. Ground. moist	
	"		Plum.2	12:15P	180	.24	.12	.12	.10	60	50										"
	"		Tark.2	12:15P	170	.22	.12	.12	.12	60	50										"
	"		Plum.2	12:15P	180	.24	.12	.12	.10	60	50										"
	"		Tark.1	12:15P	170	.22	.12	.12	.12	60	50										"
	"		Plum.2	12:15P	180	.24	.12	.12	.10	60	50										"
5/2/37	Plot V	3.25	Tark.2	5:38P	92	.26	.60	.40	.26	60	50							.26	"	(Ground moist) Oats 2-1/2" high. Clover up. / Plowed. No Crop. Ground moist Plowed Harrowed. Ground. moist	
	" W	1.57	"	"	92	.26	.60	.40	.26	60	50							.26	"		
	" X	1.57	"	"	92	.26	.60	.40	.26	60	50							.26	"		
	" Y	3.25	Tark.1	5:12P	100	.24	.36	.36	.24	60	50								"		
	"		Plum.2	5:100P	105	.27	.36	.28	.22	60	50								"		
	"		Tark.2	5:38P	92	.26	.60	.40	.26	60	50								.27		"
5/2/37	" Z	3.12	Tark.1	5:12P	100	.24	.36	.36	.24	60	50								"	(Ground moist) Oats 2-1/2" high. Clover up. / Plowed. No Crop. Ground moist Plowed Harrowed. Ground. moist	
	"		Plum.2	5:100P	105	.27	.36	.28	.22	60	50										"
	"		Tark.2	5:38P	92	.26	.60	.40	.26	60	50								.27		"
	"		Plum.2	5:100P	105	.27	.36	.28	.22	60	50										"
	"		Tark.1	5:12P	100	.24	.36	.36	.24	60	50										"
	"		Plum.2	5:100P	105	.27	.36	.28	.22	60	50										"
5/6/37	Plot V	3.25	Tark.2	4:12P	38	.88	5.04	2.76	1.52	74	49							0.69	1.105	(Ground moist) Oats 2-1/2" high. Clover up. / Plowed. No Crop. Ground moist Plowed Harrowed. Ground. moist	
	" W	1.57	"	"	38	.88	5.04	2.76	1.52	74	49							.88	.168		
	" X	1.57	"	"	38	.88	5.04	2.76	1.52	74	49							.70	.328		
	" Y	3.25	Tark.1	4:34P	44	1.02	6.00	3.12	1.68	74	49							.82	2.772		
	"		Plum.2	4:12P	38		5.04	2.76	1.52	74	49										
	"		Tark.2	4:34P	44		6.00	3.12	1.68	74	49										
5/20/37	" Z	3.12	Tark.1	4:34P	44	1.02	6.00	3.12	1.68	74	49							.94	.236	(Ground moist) Oats 2-1/2" high. Clover up. / Plowed. No Crop. Ground moist Plowed Harrowed. Ground. moist	
	"		Plum.2	4:34P	44		6.00	3.12	1.68	74	49										
	"		Tark.2	4:34P	44		6.00	3.12	1.68	74	49										
	"		Plum.2	4:34P	44		6.00	3.12	1.68	74	49										
	"		Tark.1	4:34P	44		6.00	3.12	1.68	74	49										
	"		Plum.2	4:34P	44		6.00	3.12	1.68	74	49										
5/20/37	Plot V	3.25	Tark.2	2:10P	38	.79	3.60	2.84	1.52	88	57									(Ground moist) Oats 2-1/2" high. Clover up. / Plowed. No Crop. Ground moist Plowed Harrowed. Ground. moist	
	" W	1.57	"	"	38	.79	3.60	2.84	1.52	88	57										
	" X	1.57	"	"	38	.79	3.60	2.84	1.52	88	57										
	" Y	3.25	Tark.1	2:10P	25	.59	3.60	2.84	1.52	88	57										
	"		Plum.2	2:10P	40	.79	3.60	2.84	1.52	88	57										
	"		Tark.2	2:10P	25	.79	3.60	2.84	1.52	88	57										
5/20/37	" Z	3.12	Tark.1	2:10P	40	.59	3.60	2.84	1.52	88	57									(Ground moist) Oats 2-1/2" high. Clover up. / Plowed. No Crop. Ground moist Plowed Harrowed. Ground. moist	
	"		Plum.2	2:10P	40	.59	3.60	2.84	1.52	88	57										
	"		Tark.2	2:10P	40	.59	3.60	2.84	1.52	88	57										
	"		Plum.2	2:10P	40	.59	3.60	2.84	1.52	88	57										
	"		Tark.1	2:10P	40	.59	3.60	2.84	1.52	88	57										
	"		Plum.2	2:10P	40	.59	3.60	2.84	1.52	88	57										

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
DIVISION OF RESEARCH

Product: Clarinda, Iowa

RECORD OF SINGLE STORMS AND THEIR RUN-OFFS ON VARIOUS WATERSHEDS

MONTH May & June, 1937
SHEET 4 OF 8 SHEETS

DATE	WATERSHED	Number	Area (acres)	Gage No.	Peak (hour)	Duration (minutes)	Amount (inches)	MAXIMUM INTENSITY						INTERMITTENT (inches per hour)		MAXIMUM MINIMUM	RUN-OFF		MAXIMUM RATE		RAINFALL METRIC (inches)	RPT. LOSS (cfs per acre)	CONDITION OF WATERSHED
								3 minutes (1/4 in. or less)	1 minute (1/8 in. or less)	1/2 minute (1/16 in. or less)	1/4 minute (1/32 in. or less)	1/2 minute (1/16 in. or less)	1/4 minute (1/32 in. or less)	1/2 minute (1/16 in. or less)	1/4 minute (1/32 in. or less)		1/2 minute (1/16 in. or less)	1/4 minute (1/32 in. or less)	1/2 minute (1/16 in. or less)	1/4 minute (1/32 in. or less)			
5/20/37		Plot V	3.25	Tark. 2	7:35P	130	.63	2.16	1.92	1.24	88	57	2:50P	10:17P	0.324	3.17	7:54P	1.16	1.195	1.195	Notes: 6-8" high. Clover up. Ground		
"		"	1.97	"	-do-	130	.48	2.16	1.92	1.24	88	57	3:07P	8:01P	.007	.12	7:55P	1.46	2.260	2.260	Corn planted May 17		
"		"	1.97	"	-do-	130	.68	2.16	1.92	1.24	88	57	7:16P	8:45P	.125	.77	7:53P	1.34	.418	.418	Corn planted 5/17. Loose & dry.		
"		"	3.25	Tark. 1	7:37P	123	.59	2.16	1.92	1.24	88	57	2:53P	8:11P	.307	2.32	7:54P	.97	1.552	1.552	Notes: 6-7" high. Clover 2" high.		
"		"	3.25	Tark. 2	7:35P	125	.92	2.16	1.92	1.24	88	57	7:16P	8:59P	.047	.46	7:50P	1.13	.114	.114	Notes: 6-7" high. Clover up. Ground		
5/25/37		Plot V	3.25	Tark. 2	11:12A	78	.14	.24	.20	.16	71	59	Refer to 5/26/37 storm								None		
"		"	1.97	"	11:12A	78	.14	.24	.20	.16	71	59	Refer to 5/26/37 storm								None		
"		"	1.97	"	11:12A	78	.14	.24	.20	.16	71	59	Refer to 5/26/37 storm								None		
"		"	3.25	Tark. 1	11:05A	77	.14	.56	.24	.20	71	59	Refer to 5/26/37 storm								None		
"		"	3.25	Tark. 2	11:05A	78	.14	.56	.24	.20	71	59	Refer to 5/26/37 storm								None		
5/20/37		Plot V	3.25	Tark. 2	12:38A	117	.45	1.14	1.24	.72	79	54	2:16A	4:37A	.023	.29	2:20A	.57	.046	.046	Notes: 12"-14" high. Clover 3"-4"		
"		"	1.97	"	-do-	117	.45	1.14	1.24	.72	79	54			.003			.59	.005	.005	Ground moist.		
"		"	1.97	"	-do-	117	.45	1.14	1.24	.72	79	54									No hydrograph		
"		"	3.25	Tark. 1	12:00A	25	.36	2.16	1.28	.72	79	54			.030			.52	.067	.067	No hydrograph		
"		"	3.25	Tark. 2	12:38A	117	.45	1.14	1.24	.72	79	54										No hydrograph	
5/30/37		Plot V	3.25	Tark. 2	12:51P	24	.33	1.80	1.04	.66	80	61						.33			None		
"		"	1.97	"	-do-	24	.33	1.80	1.04	.66	80	61						.33			None		
"		"	1.97	"	-do-	24	.33	1.80	1.04	.66	80	61						.33			None		
"		"	3.25	Tark. 1	12:50P	30	.43	1.14	.92	.86	80	61						.25			None		
"		"	3.25	Tark. 2	12:51P	35	.25	.80	.60	.43	80	61						.25			None		
6/5/37		Plot V	3.25	Tark. 2	1:12A	113	.43	1.68	.92	.56	67	47						.43			None		
"		"	1.97	"	-do-	113	.43	1.68	.92	.56	67	47						.43			None		
"		"	1.97	"	-do-	113	.43	1.68	.92	.56	67	47						.43			None		
"		"	3.25	Tark. 1	1:25A	115	.43	1.14	.92	.56	67	47						.35			None		
"		"	3.25	Tark. 2	1:20A	115	.35	.84	.68	.42	67	47						.35			None		

UNITED STATES DEPARTMENT OF AGRICULTURE
 SOIL CONSERVATION SERVICE
 DIVISION OF RESEARCH
PROJECT Clartide, Iowa

RECORD OF SINGLE STORMS AND THEIR RUN-OFFS ON VARIOUS WATERSHEDS

 MONTH June & July, 19 37
 SHEET 5 OF 8 SHEETS

DATE		WATERSHED		RAINFALL										TEMPERATURE (Fahrenheit)		WIND-VELOCITY		RAINFALL MEASUREMENT		CONDITION OF WATERSHED	
Number	Area (Acres)	Order No.	Begin (Hour)	Duration (minutes)	Amount (Inches)	1 minute (inches per hour)	15 minutes (inches per hour)	30 minutes (inches per hour)	Maximum	Minimum	Begin (Hour)	End (Hour)	Amount (Inches)	Co. ft. sec.	Time	Run-off (Inches)	Rise (Inches per acre)				
7/13/37	Plot V	3.25	Terk. 2 11:25P	130	1.36	2.08	2.08	1.98	85	59	11:55P	12:32A	0.110	1.57	12:03A	1.25	0.036	(dry) Oats 25"-10". Clover 12" high.			
	" W	1.97	" -do-	130	1.36	2.08	2.08	1.98	85	59	11:57P	12:08A	.004	.10	12:05A	1.36	.596	Corn 13" high. Ground dry.			
	" X	1.97	" "	130	1.36	2.08	2.08	1.98	85	59	11:59P	12:51A	.102	.46	12:09A	1.26	.072	Corn 13" high. Ground dry.			
	" Y	3.25	Terk. 1 11:30P	185	1.17	3.24	2.09	1.96	85	59	12:03A	12:21A	.020	.37	12:09A	1.15	.159	Oats 26" high. Ground dry.			
	" Z	3.12	Terk. 2 11:25P	130	1.17	3.24	2.09	1.96	85	59											
	"		Terk. 1 11:30P	195		3.24	2.08	1.89	85	59	12:05A	12:21A	.001	.015	12:10A	1.17	.006	headed Oats 25" high. Ground dry.			
7/13/37	Plot V	3.25	Terk. 2 8:30P	235	1.13	2.00	1.44	1.18	79	59	12:00P	1:29A	.152	1.14	12:23A	.98	.031	(dry) Oats 36"-40". Clover 12". Ground			
	" W	1.97	" "	235	1.13	2.00	1.44	1.18	79	59	11:56P	12:03A	.016	.45	12:09	1.11	1.180	Corn 13" high. Ground dry.			
	" X	1.97	" "	235	1.13	2.00	1.44	1.18	79	59	12:02A	2:02A	.205	.88	12:19A	.92	.222	Corn 11" high. Ground dry.			
	" Y	3.25	Terk. 1 8:45P	230	1.12	2.04	1.24	1.15	79	59	12:01A	12:30A	.040	.61	12:16A	1.08	.090	Oats headed 36"-40". Clover 12" Ground moist.			
	" Z	3.12	Terk. 2 8:30P	230	1.12	2.04	1.24	1.15	79	59											
	"		Plum 2 8:30P	250		2.04	1.24	1.00	79	59	12:12A	12:35A	.008	.10	12:17A	1.11	.004	Oats 36"-40" high. Headed clover 12" high. Ground moist.			
	"		Terk. 1 8:45P	230		2.04	1.24	1.00	79	59											
7/12/37	Plot V	3.25	Terk. 2 12:30A	320	1.36	2.16	1.32	1.24	91	65			none			1.36	none				
	" W	1.97	" "	320	1.36	2.16	1.32	1.24	91	65			"			1.36	"				
	" X	1.97	" "	320	1.36	2.16	1.32	1.24	91	65			"			1.36	"				
	" Y	3.25	Terk. 1 12:20A	317	1.36	2.16	1.32	1.12	91	65			"			1.36	"				
	" Z	3.12	Plum 2 12:03A	320	1.36	2.16	1.32	1.12	91	65			"			1.36	"				
	"		Terk. 1 12:20A	317		2.16	1.32	1.12	91	65											
	"		Plum 2 12:03A	317		2.16	1.32	1.12	91	65											
	"		Terk. 1 12:20A	320		2.16	1.32	1.12	91	65											
7/12/37	Plot V	3.25	Terk. 2 12:10A	185	.31	.36	.24	.16	83	66	Refer to 7/14/37 storm.	Sheet 5 of 8 sheets									
	" W	1.97	" "	185	.31	.36	.24	.16	83	66			none			.31	none				
	" X	1.97	" "	185	.31	.36	.24	.16	83	66			"				"				
	" Y	3.25	Terk. 1 12:30A	125	.26	.24	.24	.20	83	66											
	" Z	3.12	Plum 2 11:55P	155	.24	.24	.24	.20	83	66	Refer to 7/14/37 storm.	Sheet 5 of 8 sheets									
	"		Terk. 2 12:10A	185		.36	.24	.16	83	66			none			.24	none				
	"		Terk. 1 12:30A	135		.24	.24	.20	83	66											
	"		Plum 2 11:55P	155		.24	.24	.20	83	66											
	"		Terk. 1 12:30A	125		.24	.24	.20	83	66											

RECORD OF SINGLE STORMS AND THEIR RUN-OFFS ON VARIOUS WATERSHEDS

MONTH July, 1937
SHEET 6 OF 8 SHEET

DATE	WATERED				RAINFALL										MAXIMUM TEMPERATURE		MAXIMUM WIND		ICE-GOFF				RAINFALL MEASUREMENT		CONDITION OF WATERED
	Number	Area (acres)	Order No.	Region (town)	Duration (minutes)	Amount (inches)	5 minutes (inches per hour)			15 minutes (inches per hour)		30 minutes (inches per hour)		Maximum	Minimum	Region (town)	Range (feet)	Amount (inches)	Maximum Rate		Rainfall Measured (inches)	Rise (feet)			
							(8)	(9)	(10)	(11)	(12)	(13)	(14)						(15)	(16)					
7/14/37	Plot V	3.25	Tark. 2 1137A	13	1.42	3.12	1.63	.84	92	69								.004			1.42	trace	no hydrograph. Data out.		
	" W	1.97	" "	13	1.42	3.12	1.58	.84	92	69								none			1.42	none			
	" X	1.97	Tark. 1 1130A	20	.38	2.04	1.14	.76	92	69								.005			1.43	.003	no hydrograph. Data out.		
	" Y	3.25	Plum 2 1137A	20	.43	2.16	1.68	.86																	
	" Z	3.12	Tark. 2 1130A	20	.43	2.04	1.14	.76																	
	"		Tark. 1 1130A	20	.38	2.16	1.68	.86	92	69								none			1.43	none			
7/18/37	Plot V	3.25	Tark. 2 6159P	186	1.53	3.96	3.84	2.56	86	59	7:15P	7:35P	.013	0.255	7:26P	1.62	.004				1.62	.004	Oats out. Clover dead. Ground		
	" W	1.97	" "	186	1.63	3.96	3.84	2.56	86	59	7:05P	7:12P	.003	.10	7:08	1.63	.108				1.63	.108	Corn 6' high. Ground wet.		
	" X	1.97	Tark. 1 6147P	186	1.63	3.96	3.84	2.56	86	59	7:13P	7:27P	.006	.08	7:15	1.62	.091				1.62	.091	Corn 6' high. Ground moist.		
	" Y	3.25	Plum 2 6150P	190	1.64	4.56	3.84	2.56										none			1.63	traces	Oats out. Ground moist		
	" Z	3.12	Tark. 1 6147P	183	1.64	4.56	3.84	2.56										none			1.64	traces	no hydrograph		
7/24/37	Plot V	3.25	Tark. 2 6102A	118	.22	.35	.28	.22	93	65								none			.22	none	Oats out. Ground moist.		
	" W	1.97	" "	118	.22	.36	.28	.22	93	65								"			.22	"	no hydrograph. Corn maturing.		
	" X	3.25	Tark. 1 6155A	100	.21	.36	.24	.16	93	65								"			.20	"			
	" Y		Plum 2 6110A	118	.20	.36	.28	.22										"							
	" Z	3.12	Tark. 1 6155A	100	.21	.36	.24	.16										"							
	"		Plum 2 6110A	110	.20	.36	.24	.16	93	65								"			.20	"			
7/29/37	Plot V	3.25	Tark. 2 7152P	233	1.53	3.60	2.24	1.78	87	61	8:20P	9:28P	.026	.15	9:00P	1.50	.001				1.50	.001	Oats out. Ground moist.		
	" W	1.97	" "	233	1.53	3.60	2.24	1.78	87	61								.062			1.46	.043	no hydrograph. Corn maturing.		
	" X	1.97	Tark. 1 7155P	230	1.49	2.10	1.84	1.64	87	61								none			1.53	none			
	" Y	3.25	Plum 2 7152P	233	1.49	3.00	2.16	1.78			8:25P	9:25P	.029	.22	8:53	1.46	.007				1.46	.007	Oats out.		
	" Z	3.12	Tark. 1 7155P	230	1.49	2.10	1.84	1.64										none			1.46	none			
	"		Plum 2 7155P	230	1.49	3.00	2.16	1.78										none							
	"		Tark. 1 7155P	230	1.49	2.10	1.84	1.64										none							

UNITED STATES DEPARTMENT OF AGRICULTURE
 SOIL CONSERVATION SERVICE
 DIVISION OF RESEARCH

 PROJECT **Charlinda, Iowa**
 S. L. KAUTER, PROJECT SCIENTIST, R. 1234

RECORD OF SINGLE STORMS AND THEIR RUN-OFFS ON VARIOUS WATERSHEDS

 MONTH **August, September**, 19 **37**
 SHEET **7** OF **8** SHEETS

Date	Watershed	Area (acres)	Stage (ft.)	Basin (hours)	Duration (minutes)	Amount (inches)	Maximum Intensity				Maximum	Minimum	Basin (hours)	Peak (feet)	Amount (inches)	Maximum Rate		Excess Water (inches)	Blt Loss (inches)	
							3 minutes (inches per hour)	15 minutes (inches per hour)	1 hour (inches per hour)	24 hours (inches per hour)						Cm. H. sec.	Time			
8/19/37	Plot V	3.25	Tark.2	2:00A	135	.50	.60	.54	.36	87	67						0.50	None		
"	"	1.97	-40-	-40-	135	.30	.60	.54	.36	87	67						.50	-40-		
"	"	1.97	-40-	-40-	135	.50	.60	.54	.36	87	67						.50	-40-		
"	"		Tark.1	1:54A	136	.52	.82	.64	.48											
"	"		Plum.2	2:00A	135	.47	.64	.52	.36	87	67						.47	-40-		
"	"		Tark.2	2:00A	135	.50	.60	.54	.36											
"	"		Tark.1	1:54A	136	.52	.82	.64	.48											
"	"	3.12	Plum.2	2:00A	135	.47	.64	.52	.36	87	67						.47	-40-		
"	"		Tark.1	1:54A	136	.52	.82	.64	.48											
8/20/37	Plot V	3.25	Tark.2	1:11A	164	1.02	1.56	1.36	.94	79	57						1.02	None		
"	"	1.97	-40-	-40-	164	1.02	1.56	1.36	.94	79	57						1.02	-40-		
"	"	1.97	-40-	-40-	164	1.02	1.56	1.36	.94	79	57						1.02	-40-		
"	"		Tark.1	1:05A	160	1.04	1.92	1.16	.62								.99	-40-		
"	"		Plum.2	1:38A	127	1.89	1.20	1.16	.88	79	57						.99	-40-		
"	"		Tark.2	1:11A	164	1.02	1.56	1.36	.94											
"	"		Tark.1	1:05A	160	1.04	1.92	1.16	.62											
"	"	3.12	Plum.2	1:38A	127	.99	1.20	1.16	.88	79	57						.99	-40-		
"	"		Tark.1	1:05A	160	1.04	1.92	1.16	.62											
9/23/37	Plot V	3.25	Tark.2	12:30P	255	.35	.48	.40	.24	85	66						.35	None		
"	"	1.97	-40-	-40-	255	.35	.48	.40	.24	85	66						.35	-40-		
"	"	1.97	-40-	-40-	255	.35	.48	.40	.24	85	66						.35	-40-		
"	"		Tark.1	12:10P	255	.34	.48	.40	.20								.34	-40-		
"	"		Plum.2	12:30P	255	.34	.48	.40	.24											
"	"		Tark.2	12:10P	255	.35	.48	.40	.26											
"	"		Plum.2	12:30P	255	.34	.48	.40	.26											
"	"	3.12	Tark.1	12:10P	255	.34	.48	.40	.20	85	66						.34	-40-		
9/24/37	Plot V	3.25	Tark.2	2:10A	30	.25	1.20	.68	.50	77	51						.25	None		
"	"	1.97	-40-	-40-	30	.25	1.20	.68	.50	77	51						.25	-40-		
"	"	1.97	-40-	-40-	30	.25	1.20	.68	.50	77	51						.25	-40-		
"	"		Tark.1	1:52A	23	.25	1.08	.72	.50								.25	-40-		
"	"		Plum.2	1:40A	30	.25	.83	.76	.50	77	51									
"	"		Tark.2	2:10A	30	.25	1.20	.68	.50											
"	"		Tark.1	1:52A	23	.25	1.08	.72	.50											
"	"		Plum.2	1:40A	30	.25	.83	.76	.50	77	51						.25	-40-		
"	"	3.12	Tark.1	1:52A	23	.25	1.08	.72	.50											

UNITED STATES DEPARTMENT OF AGRICULTURE
 SOIL CONSERVATION SERVICE
 DIVISION OF RESEARCH

RECORD OF SINGLE STORMS AND THEIR RUN-OFFS ON VARIOUS WATERSHEDS

 PROJECT Clarinda, Iowa

 MONTH October & November, 1937
 SHEET 8 OF 8

R. E. SCHMIDT, DISTRICT OFFICIAL, R. 1, Iowa

DATE	WATERSHED Number	Area (Acres)	Stage No.	Basin (Acres)	Duration (minutes)	Amount (Inches)	MAXIMUM INTENSITY				TOTAL RAINFALL (Inches P.)		HOURS-OF				RAINFALL MOVING HOURS-OF		GUT LOSS (Inches)	CONTRIBUTION OF WATERSHED	
							3 minutes (Inches Per Hour)	15 minutes (Inches Per Hour)	30 minutes (Inches Per Hour)	Maximum	Minimum	Peak (Inches)	Amount (Inches)	MAXIMUM RATE		RAINFALL MOVING HOURS-OF	GUT LOSS (Inches)				
														Cu R sec.	Tons			Cu R sec.			Tons
10/8/37	Plot V	3.25	Tark. 2	4.45P	1.05	.21	.21	.12	.08	56	36										
"	"	1.97	-do-	-do-	1.05	.21	.21	.12	.08	56	36										
"	"	1.97	Tark. 1	4.45P	1.05	.21	.21	.16	.16	56	36										
"	"	3.25	Tark. 2	4.45P	1.05	.21	.21	.12	.08	56	36										
"	"	3.12	Tark. 1	4.45P	1.20	.26	.12	.16	.16	56	36										
"	"	3.12	Tark. 2	4.45P	1.20	.26	.12	.08	.08	56	36										
"	"	3.12	Tark. 1	4.45P	1.20	.26	.12	.16	.16	56	36										
10/16/37	Plot V	3.25	Tark. 2	5.50P	3.65	.48	.24	.24	.22	45	35										
"	"	1.97	-do-	-do-	3.65	.48	.24	.24	.22	45	35										
"	"	1.97	-do-	-do-	3.65	.48	.24	.24	.22	45	35										
"	"	3.25	Tark. 1	5.45P	3.75	.55	.36	.32	.28	45	35										
"	"	3.25	Plum 2	5.40P	3.75	.52	.24	.24	.24	45	35										
"	"	3.25	Tark. 2	5.50P	3.65	.48	.24	.24	.22	45	35										
"	"	3.12	Tark. 1	5.45P	3.70	.55	.36	.32	.28	45	35										
"	"	3.12	Plum 2	5.45P	3.75	.52	.24	.24	.24	45	35										
"	"	3.12	Tark. 1	5.45P	3.70	.55	.36	.32	.28	45	35										
"	"	3.12	Tark. 1	5.45P	3.70	.55	.36	.32	.28	45	35										
10/17/37	Plot V	3.25	Tark. 2	6.40P	1.70	.21	.24	.20	.16	60	43										
"	"	1.97	-do-	-do-	1.70	.21	.24	.20	.16	60	43										
"	"	1.97	-do-	-do-	1.70	.21	.24	.20	.16	60	43										
"	"	3.25	Tark. 1	6.30P	1.80	.22	.24	.20	.16	60	43										
"	"	3.25	Plum 1	6.40P	1.55	.21	.36	.28	.20	60	43										
"	"	3.25	Tark. 2	6.40P	1.70	.21	.24	.20	.16	60	43										
"	"	3.25	Tark. 1	6.30P	1.80	.22	.24	.20	.16	60	43										
"	"	3.12	Plum 2	6.40P	1.55	.21	.36	.28	.20	60	43										
"	"	3.12	Tark. 1	6.30P	1.55	.21	.36	.28	.20	60	43										
"	"	3.12	Tark. 1	6.30P	1.80	.22	.22	.08	.08	60	43										
11/7/37	Plot V	3.25	Tark. 2	11.37P	1.9	.21	1.20	.76	.42	74	39										
"	"	1.97	-do-	-do-	1.9	.21	1.20	.76	.42	74	39										
"	"	1.97	-do-	-do-	1.9	.21	1.20	.76	.42	74	39										
"	"	3.25	Tark. 1	11.30P	1.5	.22	1.08	.88	.44	74	39										
"	"	3.25	Plum 2	11.30P	1.5	.22	1.20	.76	.42	74	39										
"	"	3.25	Tark. 2	11.37P	1.8	.21	1.20	.76	.42	74	39										
"	"	3.12	Tark. 1	11.30P	1.5	.22	1.08	.88	.44	74	39										
"	"	3.12	Plum 2	11.30P	1.5	.22	1.20	.76	.42	74	39										
"	"	3.12	Tark. 1	11.30P	1.5	.22	1.20	.76	.42	74	39										
"	"	3.12	Tark. 1	11.30P	1.5	.22	1.20	.76	.42	74	39										
"	"	3.12	Tark. 1	11.30P	1.5	.22	1.20	.76	.42	74	39										
"	"	3.12	Tark. 1	11.30P	1.5	.22	1.20	.76	.42	74	39										
"	"	3.12	Tark. 1	11.30P	1.5	.22	1.20	.76	.42	74	39										
"	"	3.12	Tark. 1	11.30P	1.5	.22	1.20	.76	.42	74	39										
"	"	3.12	Tark. 1	11.30P	1.5	.22	1.20	.76	.42	74	39										
"	"	3.12	Tark. 1	11.30P	1.5	.22	1.20	.76	.42	74	39										
"	"	3.12	Tark. 1	11.30P	1.5	.22	1.20	.76	.42	74	39										
"	"	3.12	Tark. 1	11.30P	1.5	.22	1.20	.76	.42	74	39										
"	"	3.12	Tark. 1	11.30P	1.5	.22	1.20	.76	.42	74	39										
"	"	3.12	Tark. 1	11.30P	1.5	.22	1.20	.76	.42	74	39										
"	"	3.12	Tark. 1	11.30P	1.5	.22	1.20	.76	.42	74	39										
"	"	3.12	Tark. 1	11.30P	1.5	.22	1.20	.76	.42	74	39										
"	"	3.12	Tark. 1	11.30P	1.5	.22	1.20	.76	.42	74	39										
"	"	3.12	Tark. 1	11.30P	1.5	.22	1.20	.76	.42	74	39										
"	"	3.12	Tark. 1	11.30P	1.5	.22	1.20	.76	.42	74	39										
"	"	3.12	Tark. 1	11.30P	1.5	.22	1.20	.76	.42	74	39										
"	"	3.12	Tark. 1	11.30P	1.5	.22	1.20	.76	.42	74	39										
"	"	3.12	Tark. 1	11.30P	1.5	.22	1.20	.76	.42	74	39										
"	"	3.12	Tark. 1	11.30P	1.5	.22	1.20	.76	.42	74	39										
"	"	3.12	Tark. 1	11.30P	1.5	.22	1.20	.76	.42	74	39										
"	"	3.12	Tark. 1	11.30P	1.5	.22	1.20	.76	.42	74	39										
"	"	3.12	Tark. 1	11.30P	1.5	.22	1.20	.76	.42	74	39										
"	"	3.12	Tark. 1	11.30P	1.5	.22	1.20	.76	.42	74	39										
"	"	3.12	Tark. 1	11.30P	1.5	.22	1.20	.76	.42	74	39										
"	"	3.12	Tark. 1	11.30P	1.5	.22	1.20	.76	.42	74	39										
"	"	3.12	Tark. 1	11.30P	1.5	.22	1.20	.76	.42	74	39										
"	"	3.12	Tark. 1	11.30P	1.5	.22	1.20	.76	.42	74	39										
"	"	3.12	Tark. 1	11.30P	1.5	.22	1.20	.76	.42	7											

CONTINUATION OF WATERSHED

(12)

May 2, 1937

May 6, 1937

May 10, 1937

May 14, 1937

May 18, 1937

May 22, 1937

May 26, 1937

May 30, 1937

June 3, 1937

June 7, 1937

June 11, 1937

June 15, 1937

June 19, 1937

June 23, 1937

June 27, 1937

July 1, 1937

July 5, 1937

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September 24, 1941

September 30, 1941

October 7, 1941

October 14, 1941

October 21, 1941

October 28, 1941

November 4, 1941

November 11, 1941

November 18, 1941

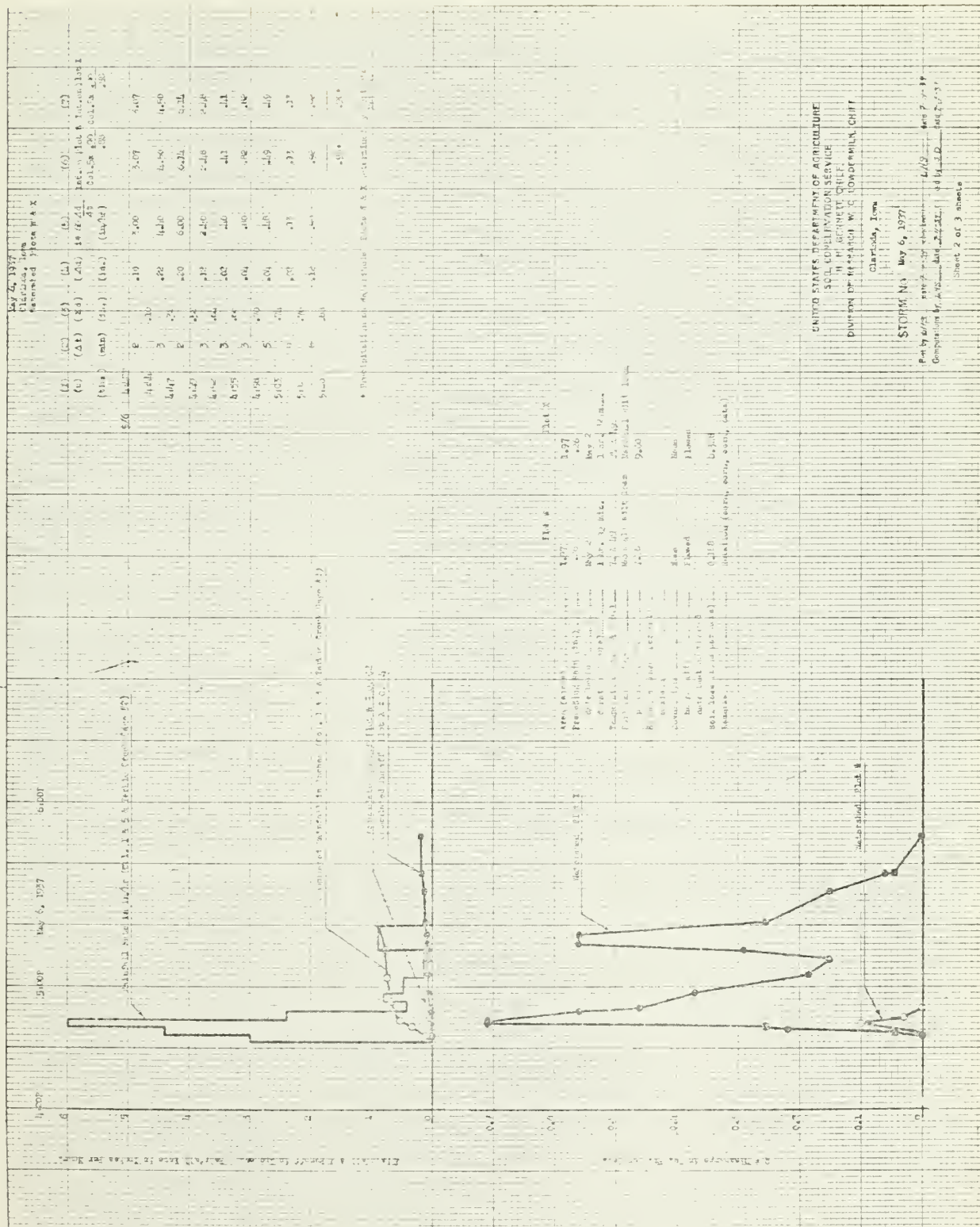
November 25, 1941

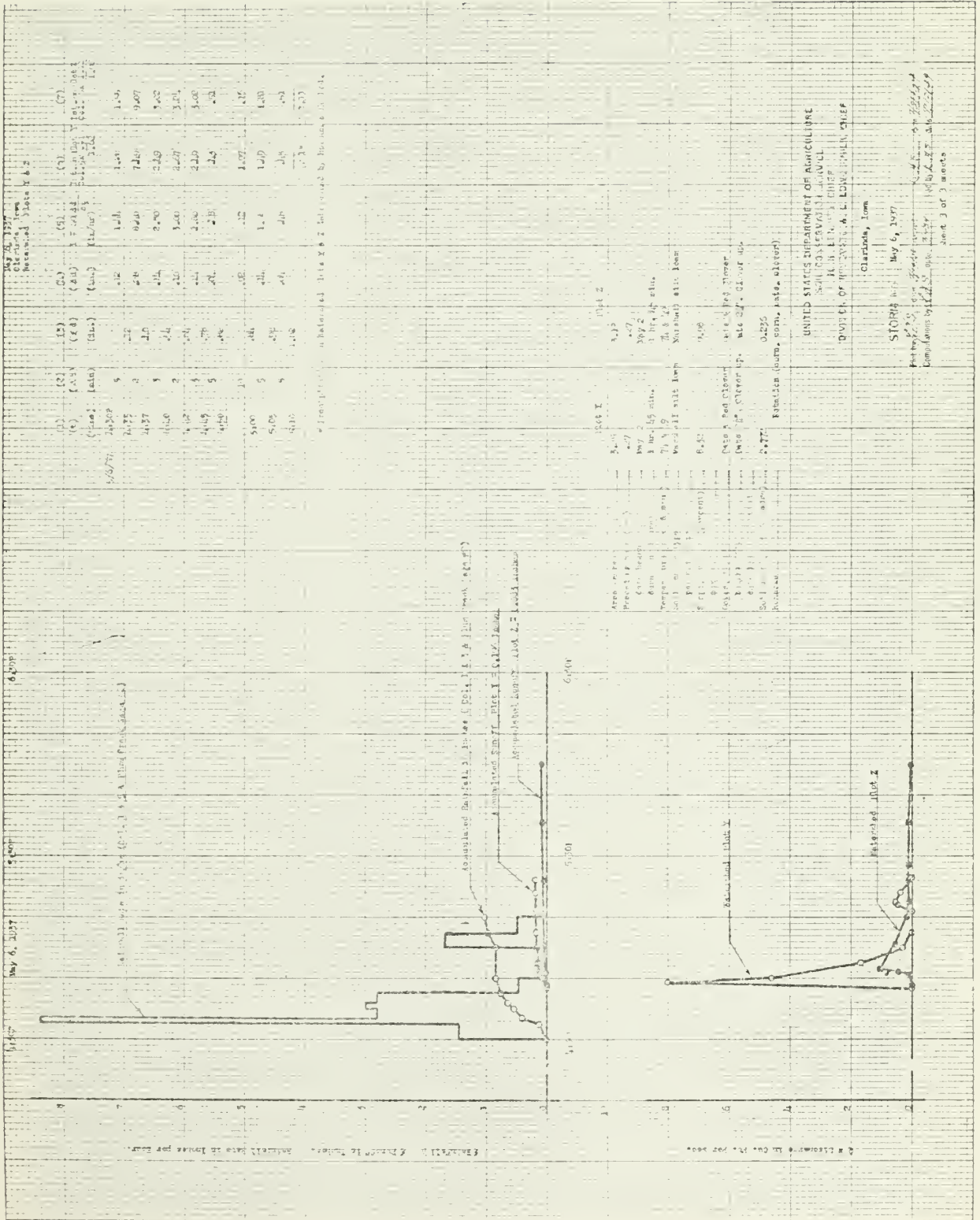
December 2, 1941

December 9, 1941

December 16, 1941

December 23, 1941



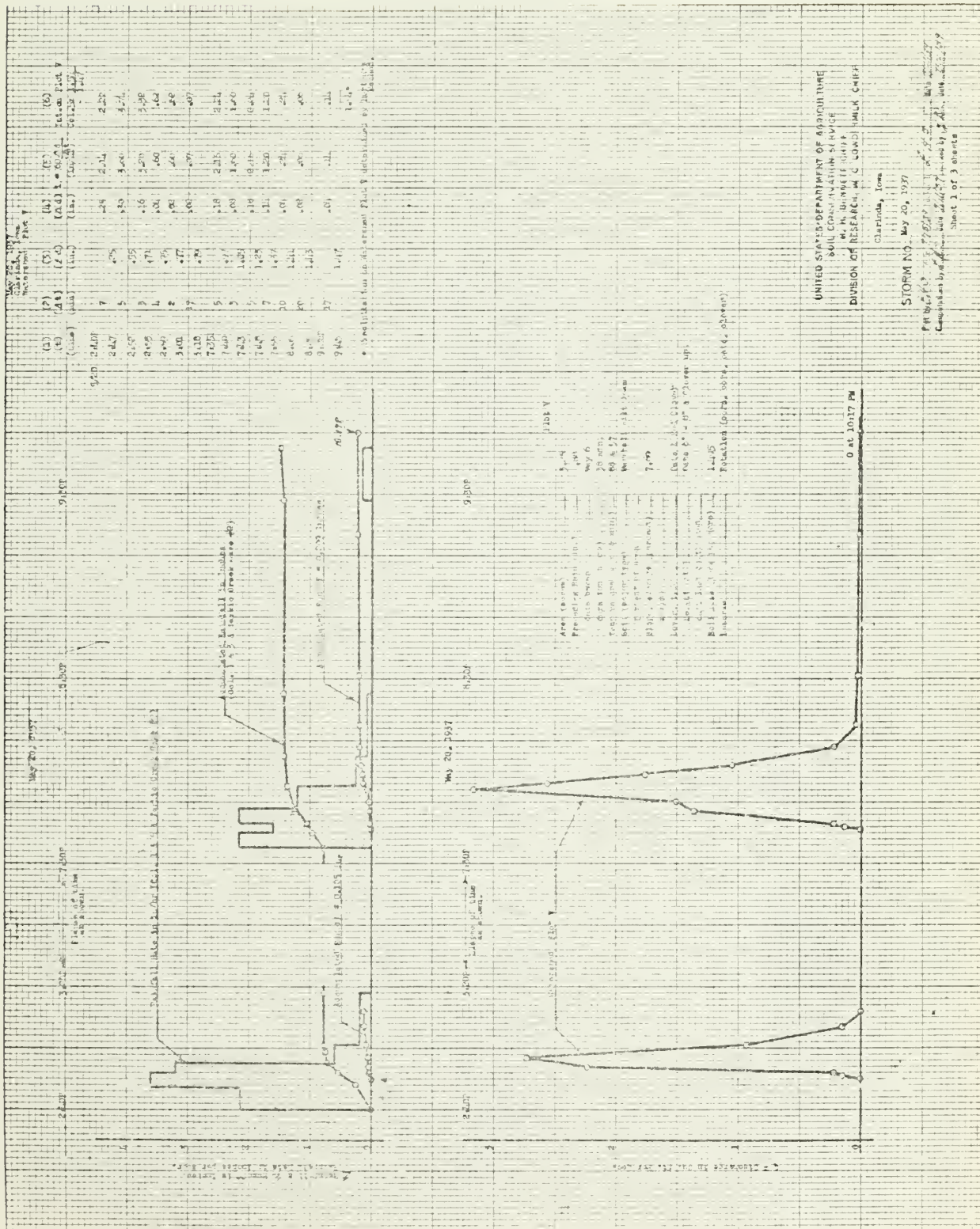


Time	(1) Rainfall (in.)	(2) Evaporation (in.)	(3) Total (in.)	(4) Wind Speed (mi/hr)	(5) Wind Direction	(6) Humidity (%)	(7) Clouds (%)	(8) Notes
6:00 AM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
7:00 AM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
8:00 AM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
9:00 AM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
10:00 AM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
11:00 AM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12:00 PM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1:00 PM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2:00 PM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
3:00 PM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4:00 PM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
5:00 PM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
6:00 PM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

Evaporation data obtained by means of a pan.

UNITED STATES DEPARTMENT OF AGRICULTURE
BUREAU OF PLANT INDUSTRY
WASHINGTON, D. C.
OFFICE OF THE CHIEF, A. L. LORAN, CHIEF
CLARK, Iowa
STATION No. May 6, 1937
Plot Y & Z, from Garden
Completed by J. L. LORAN, May 6, 1937
Page 3 of 3

May 20, 1957
Entered Plot V



UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
W. H. BURNETT, JR.
DIVISION OF RESEARCH, AND CROPLAND MANAGEMENT

Clarinda, Iowa

STORM NO. MAY 20, 1937

[illegible]

May 20, 1937

May 20, 1937

710

[illegible][illegible]

1900-1901-1902-1903-1904-1905-1906-1907-1908-1909-1910-1911-1912-1913-1914-1915-1916-1917-1918-1919-1920-1921-1922-1923-1924-1925-1926-1927-1928-1929-1930-1931-1932-1933-1934-1935-1936-1937-1938-1939-1940-1941-1942-1943-1944-1945-1946-1947-1948-1949-1950-1951-1952-1953-1954-1955-1956-1957-1958-1959-1960-1961-1962-1963-1964-1965-1966-1967-1968-1969-1970-1971-1972-1973-1974-1975-1976-1977-1978-1979-1980-1981-1982-1983-1984-1985-1986-1987-1988-1989-1990-1991-1992-1993-1994-1995-1996-1997-1998-1999-2000-2001-2002-2003-2004-2005-2006-2007-2008-2009-2010-2011-2012-2013-2014-2015-2016-2017-2018-2019-2020-2021-2022-2023-2024-2025-2026-2027-2028-2029-2030-2031-2032-2033-2034-2035-2036-2037-2038-2039-2040-2041-2042-2043-2044-2045-2046-2047-2048-2049-2050-2051-2052-2053-2054-2055-2056-2057-2058-2059-2060-2061-2062-2063-2064-2065-2066-2067-2068-2069-2070-2071-2072-2073-2074-2075-2076-2077-2078-2079-2080-2081-2082-2083-2084-2085-2086-2087-2088-2089-2090-2091-2092-2093-2094-2095-2096-2097-2098-2099-2100-2101-2102-2103-2104-2105-2106-2107-2108-2109-2110-2111-2112-2113-2114-2115-2116-2117-2118-2119-2120-2121-2122-2123-2124-2125-2126-2127-2128-2129-2130-2131-2132-2133-2134-2135-2136-2137-2138-2139-2140-2141-2142-2143-2144-2145-2146-2147-2148-2149-2150-2151-2152-2153-2154-2155-2156-2157-2158-2159-2160-2161-2162-2163-2164-2165-2166-2167-2168-2169-2170-2171-2172-2173-2174-2175-2176-2177-2178-2179-2180-2181-2182-2183-2184-2185-2186-2187-2188-2189-2190-2191-2192-2193-2194-2195-2196-2197-2198-2199-2200-2201-2202-2203-2204-2205-2206-2207-2208-2209-2210-2211-2212-2213-2214-2215-2216-2217-2218-2219-2220-2221-2222-2223-2224-2225-2226-2227-2228-2229-2230-2231-2232-2233-2234-2235-2236-2237-2238-2239-2240-2241-2242-2243-2244-2245-2246-2247-2248-2249-2250-2251-2252-2253-2254-2255-2256-2257-2258-2259-2260-2261-2262-2263-2264-2265-2266-2267-2268-2269-2270-2271-2272-2273-2274-2275-2276-2277-2278-2279-2280-2281-2282-2283-2284-2285-2286-2287-2288-2289-2290-2291-2292-2293-2294-2295-2296-2297-2298-2299-2300-2301-2302-2303-2304-2305-2306-2307-2308-2309-2310-2311-2312-2313-2314-2315-2316-2317-2318-2319-2320-2321-2322-2323-2324-2325-2326-2327-2328-2329-2330-2331-2332-2333-2334-2335-2336-2337-2338-2339-2340-2341-2342-2343-2344-2345-2346-2347-2348-2349-2350-2351-2352-2353-2354-2355-2356-2357-2358-2359-2360-2361-2362-2363-2364-2365-2366-2367-2368-2369-2370-2371-2372-2373-2374-2375-2376-2377-2378-2379-2380-2381-2382-2383-2384-2385-2386-2387-2388-2389-2390-2391-2392-2393-2394-2395-2396-2397-2398-2399-2400-2401-2402-2403-2404-2405-2406-2407-2408-2409-2410-2411-2412-2413-2414-2415-2416-2417-2418-2419-2420-2421-2422-2423-2424-2425-2426-2427-2428-2429-2430-2431-2432-2433-2434-2435-2436-2437-2438-2439-2440-2441-2442-2443-2444-2445-2446-2447-2448-2449-2450-2451-2452-2453-2454-2455-2456-2457-2458-2459-2460-2461-2462-2463-2464-2465-2466-2467-2468-2469-2470-2471-2472-2473-2474-2475-2476-2477-2478-2479-2480-2481-2482-2483-2484-2485-2486-2487-2488-2489-2490-2491-2492-2493-2494-2495-2496-2497-2498-2499-2500-2501-2502-2503-2504-2505-2506-2507-2508-2509-2510-2511-2512-2513-2514-2515-2516-2517-2518-2519-2520-2521-2522-2523-2524-2525-2526-2527-2528-2529-2530-2531-2532-2533-2534-2535-2536-2537-2538-2539-2540-2541-2542-2543-2544-2545-2546-2547-2548-2549-2550-2551-2552-2553-2554-2555-2556-2557-2558-2559-2560-2561-2562-2563-2564-2565-2566-2567-2568-2569-2570-2571-2572-2573-2574-2575-2576-2577-2578-2579-2580-2581-2582-2583-2584-2585-2586-2587-2588-2589-2590-2591-2592-2593-2594-2595-2596-2597-2598-2599-2600-2601-2602-2603-2604-2605-2606-2607-2608-2609-2610-2611-2612-2613-2614-2615-2616-2617-2618-2619-2620-2621-2622-2623-2624-2625-2626-2627-2628-2629-2630-2631-2632-2633-2634-2635-2636-2637-2638-2639-2640-2641-2642-2643-2644-2645-2646-2647-2648-2649-2650-2651-2652-2653-2654-2655-2656-2657-2658-2659-2660-2661-2662-2663-2664-2665-2666-2667-2668-2669-2670-2671-2672-2673-2674-2675-2676-2677-2678-2679-2680-2681-2682-2683-2684-2685-2686-2687-2688-2689-2690-2691-2692-2693-2694-2695-2696-2697-2698-2699-2700-2701-2702-2703-2704-2705-2706-2707-2708-2709-2710-2711-2712-2713-2714-2715-2716-2717-2718

[illegible]

Assimilated Runoff Plot # = 0.206 Inches

$$A = \frac{1}{\sqrt{\pi}} \int_{-\infty}^{\infty} e^{-k^2 x^2} dk$$

3.207 730p

May 20, 1891

	Noted	Noted
10-11-78	10-11-78	10-11-78
10-12-78	10-12-78	10-12-78
10-13-78	10-13-78	10-13-78
10-14-78	10-14-78	10-14-78
10-15-78	10-15-78	10-15-78
10-16-78	10-16-78	10-16-78
10-17-78	10-17-78	10-17-78
10-18-78	10-18-78	10-18-78
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10-29-78	10-29-78	10-29-78
10-30-78	10-30-78	10-30-78
10-31-78	10-31-78	10-31-78

2. The following are the names of the persons who have been appointed to the various committees of the Board of Directors:

1000

APR 1968	1967	1966	1965	1964	1963	1962	1961	1960	1959	1958	1957	1956	1955	1954	1953	1952	1951	1950	1949	1948	1947	1946	1945	1944	1943	1942	1941	1940	1939	1938	1937	1936	1935	1934	1933	1932	1931	1930	1929	1928	1927	1926	1925	1924	1923	1922	1921	1920	1919	1918	1917	1916	1915	1914	1913	1912	1911	1910	1909	1908	1907	1906	1905	1904	1903	1902	1901	1900	1899	1898	1897	1896	1895	1894	1893	1892	1891	1890	1889	1888	1887	1886	1885	1884	1883	1882	1881	1880	1879	1878	1877	1876	1875	1874	1873	1872	1871	1870	1869	1868	1867	1866	1865	1864	1863	1862	1861	1860	1859	1858	1857	1856	1855	1854	1853	1852	1851	1850	1849	1848	1847	1846	1845	1844	1843	1842	1841	1840	1839	1838	1837	1836	1835	1834	1833	1832	1831	1830	1829	1828	1827	1826	1825	1824	1823	1822	1821	1820	1819	1818	1817	1816	1815	1814	1813	1812	1811	1810	1809	1808	1807	1806	1805	1804	1803	1802	1801	1800	1799	1798	1797	1796	1795	1794	1793	1792	1791	1790	1789	1788	1787	1786	1785	1784	1783	1782	1781	1780	1779	1778	1777	1776	1775	1774	1773	1772	1771	1770	1769	1768	1767	1766	1765	1764	1763	1762	1761	1760	1759	1758	1757	1756	1755	1754	1753	1752	1751	1750	1749	1748	1747	1746	1745	1744	1743	1742	1741	1740	1739	1738	1737	1736	1735	1734	1733	1732	1731	1730	1729	1728	1727	1726	1725	1724	1723	1722	1721	1720	1719	1718	1717	1716	1715	1714	1713	1712	1711	1710	1709	1708	1707	1706	1705	1704	1703	1702	1701	1700	1699	1698	1697	1696	1695	1694	1693	1692	1691	1690	1689	1688	1687	1686	1685	1684	1683	1682	1681	1680	1679	1678	1677	1676	1675	1674	1673	1672	1671	1670	1669	1668	1667	1666	1665	1664	1663	1662	1661	1660	1659	1658	1657	1656	1655	1654	1653	1652	1651	1650	1649	1648	1647	1646	1645	1644	1643	1642	1641	1640	1639	1638	1637	1636	1635	1634	1633	1632	1631	1630	1629	1628	1627	1626	1625	1624	1623	1622	1621	1620	1619	1618	1617	1616	1615	1614	1613	1612	1611	1610	1609	1608	1607	1606	1605	1604	1603	1602	1601	1600	1599	1598	1597	1596	1595	1594	1593	1592	1591	1590	1589	1588	1587	1586	1585	1584	1583	1582	1581	1580	1579	1578	1577	1576	1575	1574	1573	1572	1571	1570	1569	1568	1567	1566	1565	1564	1563	1562	1561	15
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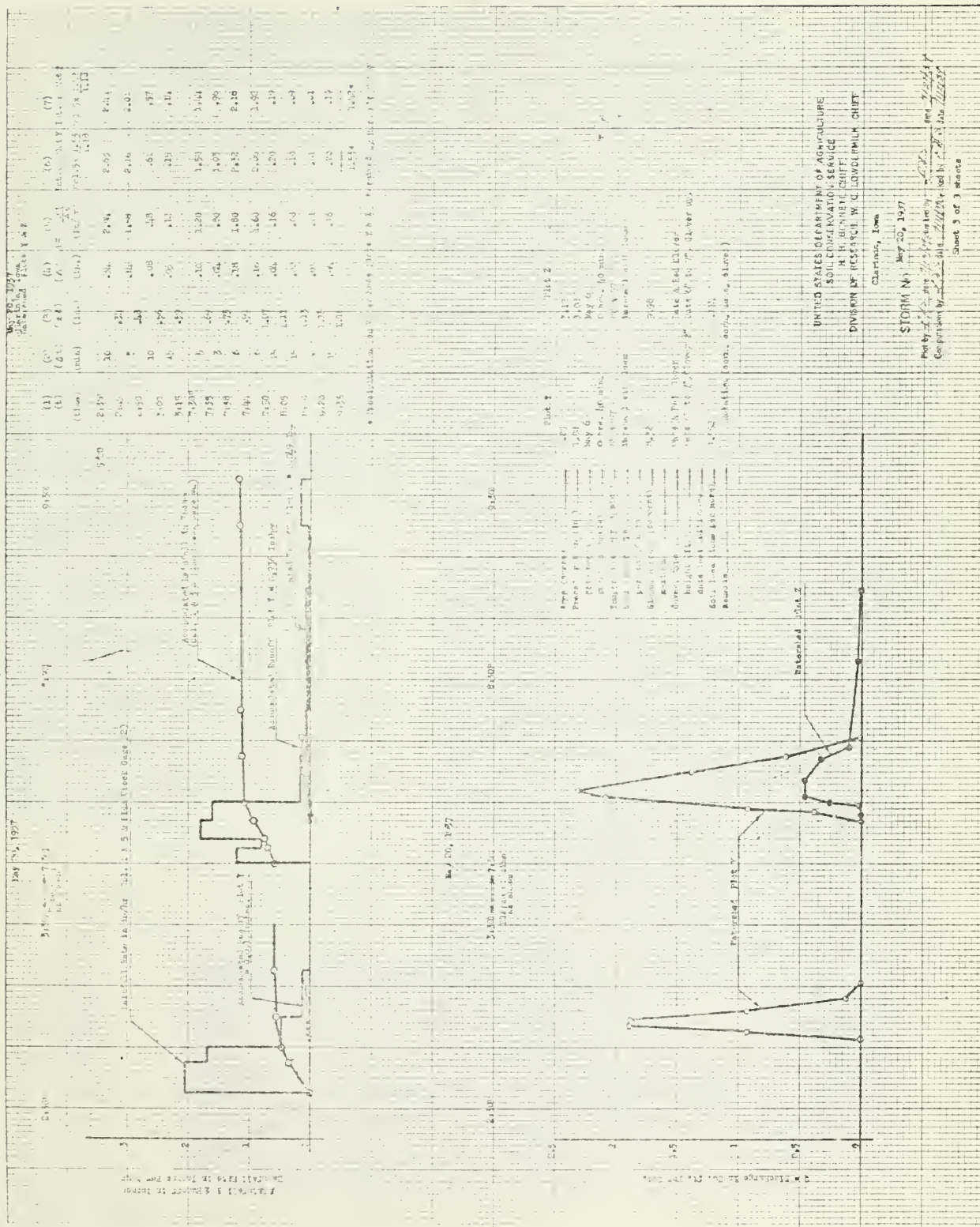
Page 100

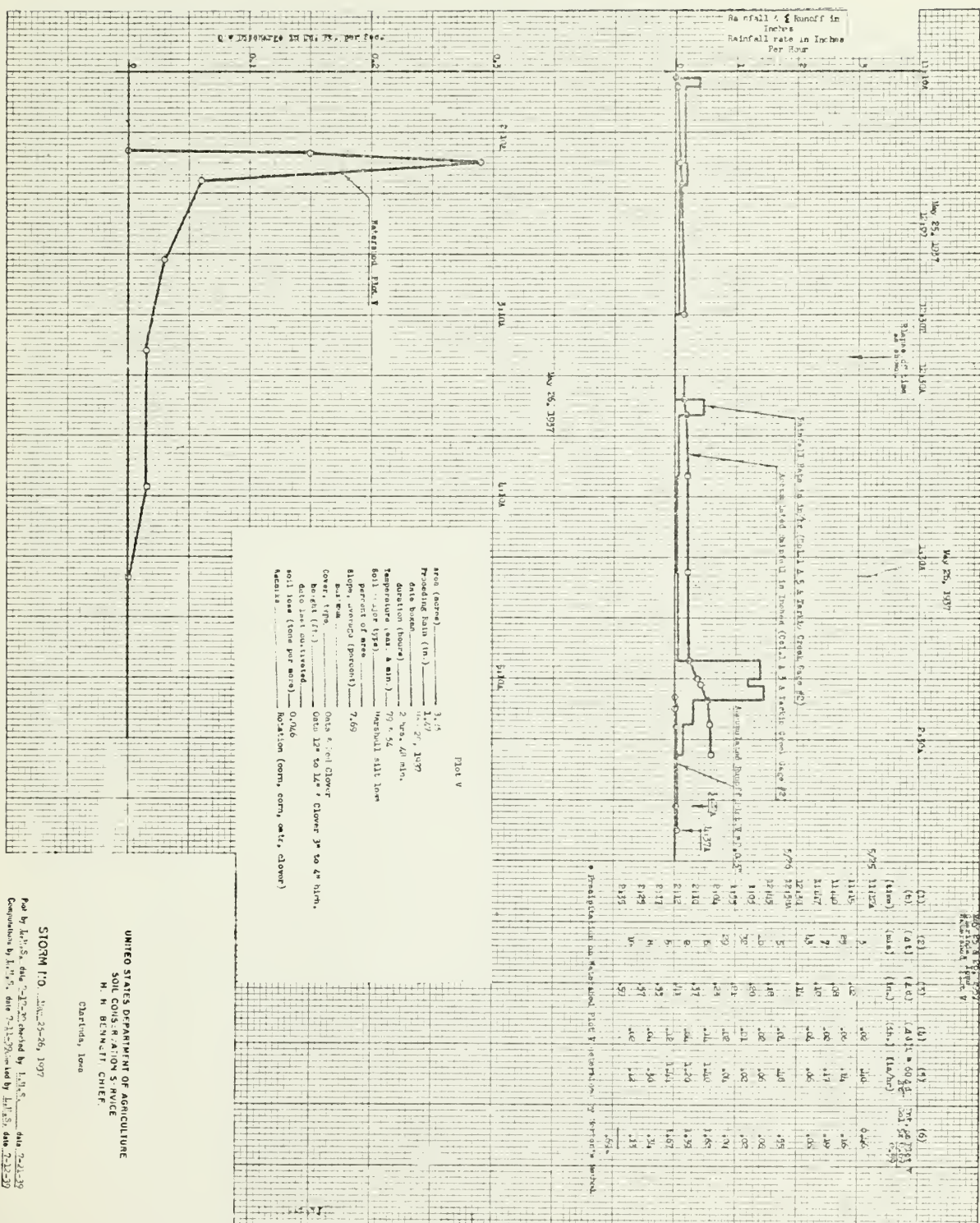
UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
W. H. BOWEN, CHIEF
DIVISION OF RESEARCH W. C. LOWDEN, CHIEF
Clarinda, Iowa

STORM N. MAY 20, 1937

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Sheet 2 of 3 sheets

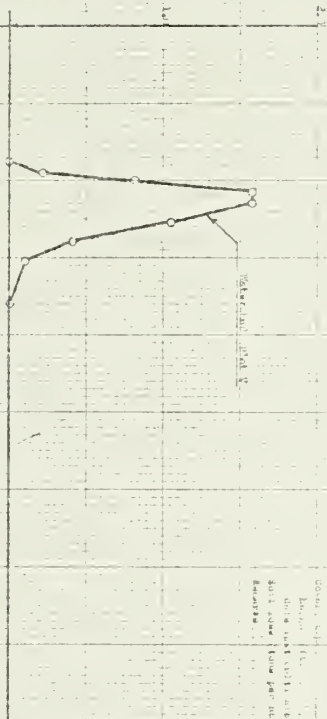




UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
M. H. BENNETT, CHIEF.
Charlotte, Iowa

STORM P.O. 25-26, 1997

Prior by $L_{11}^{11}S$, date 7-22-39 checked by $L_{11}^{11}S$, date 7-21-39
 Computations by $L_{11}^{11}S$, date 7-22-39 checked by $L_{11}^{11}S$, date 7-22-39

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Sl. No. 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100. 101. 102. 103. 104. 105. 106. 107. 108. 109. 110. 111. 112. 113. 114. 115. 116. 117. 118. 119. 120. 121. 122. 123. 124. 125. 126. 127. 128. 129. 130. 131. 132. 133. 134. 135. 136. 137. 138. 139. 140. 141. 142. 143. 144. 145. 146. 147. 148. 149. 150. 151. 152. 153. 154. 155. 156. 157. 158. 159. 160. 161. 162. 163. 164. 165. 166. 167. 168. 169. 170. 171. 172. 173. 174. 175. 176. 177. 178. 179. 180. 181. 182. 183. 184. 185. 186. 187. 188. 189. 190. 191. 192. 193. 194. 195. 196. 197. 198. 199. 200. 201. 202. 203. 204. 205. 206. 207. 208. 209. 210. 211. 212. 213. 214. 215. 216. 217. 218. 219. 220. 221. 222. 223. 224. 225. 226. 227. 228. 229. 230. 231. 232. 233. 234. 235. 236. 237. 238. 239. 240. 241. 242. 243. 244. 245. 246. 247. 248. 249. 250. 251. 252. 253. 254. 255. 256. 257. 258. 259. 260. 261. 262. 263. 264. 265. 266. 267. 268. 269. 270. 271. 272. 273. 274. 275. 276. 277. 278. 279. 280. 281. 282. 283. 284. 285. 286. 287. 288. 289. 290. 291. 292. 293. 294. 295. 296. 297. 298. 299. 300. 301. 302. 303. 304. 305. 306. 307. 308. 309. 310. 311. 312. 313. 314. 315. 316. 317. 318. 319. 320. 321. 322. 323. 324. 325. 326. 327. 328. 329. 330. 331. 332. 333. 334. 335. 336. 337. 338. 339. 340. 341. 342. 343. 344. 345. 346. 347. 348. 349. 350. 351. 352. 353. 354. 355. 356. 357. 358. 359. 360. 361. 362. 363. 364. 365. 366. 367. 368. 369. 370. 371. 372. 373. 374. 375. 376. 377. 378. 379. 380. 381. 382. 383. 384. 385. 386. 387. 388. 389. 390. 391. 392. 393. 394. 395. 396. 397. 398. 399. 400. 401. 402. 403. 404. 405. 406. 407. 408. 409. 410. 411. 412. 413. 414. 415. 416. 417. 418. 419. 420. 421. 422. 423. 424. 425. 426. 427. 428. 429. 430. 431. 432. 433. 434. 435. 436. 437. 438. 439. 440. 441. 442. 443. 444. 445. 446. 447. 448. 449. 450. 451. 452. 453. 454. 455. 456. 457. 458. 459. 460. 461. 462. 463. 464. 465. 466. 467. 468. 469. 470. 471. 472. 473. 474. 475. 476. 477. 478. 479. 480. 481. 482. 483. 484. 485. 486. 487. 488. 489. 490. 491. 492. 493. 494. 495. 496. 497. 498. 499. 500. 501. 502. 503. 504. 505. 506. 507. 508. 509. 510. 511. 512. 513. 514. 515. 516. 517. 518. 519. 520. 521. 522. 523. 524. 525. 526. 527. 528. 529. 530. 531. 532. 533. 534. 535. 536. 537. 538. 539. 540. 541. 542. 543. 544. 545. 546. 547. 548. 549. 550. 551. 552. 553. 554. 555. 556. 557. 558. 559. 560. 561. 562. 563. 564. 565. 566. 567. 568. 569. 570. 571. 572. 573. 574. 575. 576. 577. 578. 579. 580. 581. 582. 583. 584. 585. 586. 587. 588. 589. 590. 591. 592. 593. 594. 595. 596. 597. 598. 599. 600. 601. 602. 603. 604. 605. 606. 607. 608. 609. 610. 611. 612. 613. 614. 615. 616. 617. 618. 619. 620. 621. 622. 623. 624. 625. 626. 627. 628. 629. 630. 631. 632. 633. 634. 635. 636. 637. 638. 639. 640. 641. 642. 643. 644. 645. 646. 647. 648. 649. 650. 651. 652. 653. 654. 655. 656. 657. 658. 659. 660. 661. 662. 663. 664. 665. 666. 667. 668. 669. 670. 671. 672. 673. 674. 675. 676. 677. 678. 679. 680. 681. 682. 683. 684. 685. 686. 687. 688. 689. 690. 691. 692. 693. 694. 695. 696. 697. 698. 699. 700. 701. 702. 703. 704. 705. 706. 707. 708. 709. 710. 711. 712. 713. 714. 715. 716. 717. 718. 719. 720. 721. 722. 723. 724. 725. 726. 727. 728. 729. 730. 731. 732. 733. 734. 735. 736. 737. 738. 739. 740. 741. 742. 743. 744. 745. 746. 747. 748. 749. 750. 751. 752. 753. 754. 755. 756. 757. 758. 759. 760. 761. 762. 763. 764. 765. 766. 767. 768. 769. 770. 771. 772. 773. 774. 775. 776. 777. 778. 779. 780. 781. 782. 783. 784. 785. 786. 787. 788. 789. 790. 791. 792. 793. 794. 795. 796. 797. 798. 799. 800. 801. 802. 803. 804. 805. 806. 807. 808. 809. 810. 811. 812. 813. 814. 815. 816. 817. 818. 819. 820. 821. 822. 823. 824. 825. 826. 827. 828. 829. 830. 831. 832. 833. 834. 835. 836. 837. 838. 839.

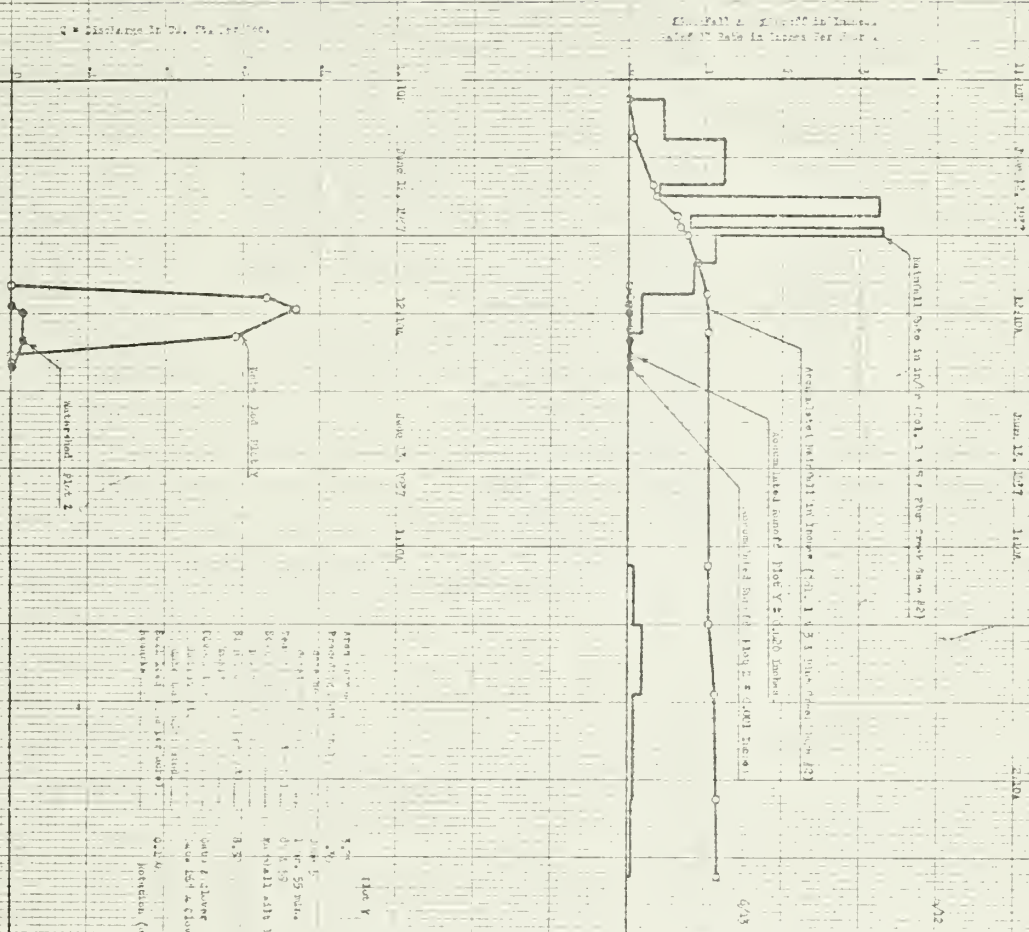
able to quantify of endogenous
the "endogenous" factor in this
model.

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
M. H. HARRIS, JR.
DIVISION OF RESEARCH AND LIVESTOCK CARE
Washington, D. C.

STORR NO June 1-2, 1968
Plots by J. H. S. date 22 July 1968 L.H.S. 0.40 27m x 30m
Computations by L.H.S. date 22 July 1968 by J.P. 1.40 + 1.25 = 2.65

Inset I of 3 sheets

Sheet 2 of 3 plates



11.156	20	0.04	0.08	0.15	0.25	0.35	0.45	0.55	0.65	0.75	0.85	0.95	1.05	1.15	1.25	1.35	1.45	1.55	1.65	1.75	1.85	1.95	2.05	2.15	2.25	2.35	2.45	2.55	2.65	2.75	2.85	2.95	3.05	3.15	3.25	3.35	3.45	3.55	3.65	3.75	3.85	3.95	4.05	4.15	4.25	4.35	4.45	4.55	4.65	4.75	4.85	4.95	5.05	5.15	5.25	5.35	5.45	5.55	5.65	5.75	5.85	5.95	6.05	6.15	6.25	6.35	6.45	6.55	6.65	6.75	6.85	6.95	7.05	7.15	7.25	7.35	7.45	7.55	7.65	7.75	7.85	7.95	8.05	8.15	8.25	8.35	8.45	8.55	8.65	8.75	8.85	8.95	9.05	9.15	9.25	9.35	9.45	9.55	9.65	9.75	9.85	9.95	10.05	10.15	10.25	10.35	10.45	10.55	10.65	10.75	10.85	10.95	11.05	11.15	11.25	11.35	11.45	11.55	11.65	11.75	11.85	11.95	12.05	12.15	12.25	12.35	12.45	12.55	12.65	12.75	12.85	12.95	13.05	13.15	13.25	13.35	13.45	13.55	13.65	13.75	13.85	13.95	14.05	14.15	14.25	14.35	14.45	14.55	14.65	14.75	14.85	14.95	15.05	15.15	15.25	15.35	15.45	15.55	15.65	15.75	15.85	15.95	16.05	16.15	16.25	16.35	16.45	16.55	16.65	16.75	16.85	16.95	17.05	17.15	17.25	17.35	17.45	17.55	17.65	17.75	17.85	17.95	18.05	18.15	18.25	18.35	18.45	18.55	18.65	18.75	18.85	18.95	19.05	19.15	19.25	19.35	19.45	19.55	19.65	19.75	19.85	19.95	20.05	20.15	20.25	20.35	20.45	20.55	20.65	20.75	20.85	20.95	21.05	21.15	21.25	21.35	21.45	21.55	21.65	21.75	21.85	21.95	22.05	22.15	22.25	22.35	22.45	22.55	22.65	22.75	22.85	22.95	23.05	23.15	23.25	23.35	23.45	23.55	23.65	23.75	23.85	23.95	24.05	24.15	24.25	24.35	24.45	24.55	24.65	24.75	24.85	24.95	25.05	25.15	25.25	25.35	25.45	25.55	25.65	25.75	25.85	25.95	26.05	26.15	26.25	26.35	26.45	26.55	26.65	26.75	26.85	26.95	27.05	27.15	27.25	27.35	27.45	27.55	27.65	27.75	27.85	27.95	28.05	28.15	28.25	28.35	28.45	28.55	28.65	28.75	28.85	28.95	29.05	29.15	29.25	29.35	29.45	29.55	29.65	29.75	29.85	29.95	30.05	30.15	30.25	30.35	30.45	30.55	30.65	30.75	30.85	30.95	31.05	31.15	31.25	31.35	31.45	31.55	31.65	31.75	31.85	31.95	32.05	32.15	32.25	32.35	32.45	32.55	32.65	32.75	32.85	32.95	33.05	33.15	33.25	33.35	33.45	33.55	33.65	33.75	33.85	33.95	34.05	34.15	34.25	34.35	34.45	34.55	34.65	34.75	34.85	34.95	35.05	35.15	35.25	35.35	35.45	35.55	35.65	35.75	35.85	35.95	36.05	36.15	36.25	36.35	36.45	36.55	36.65	36.75	36.85	36.95	37.05	37.15	37.25	37.35	37.45	37.55	37.65	37.75	37.85	37.95	38.05	38.15	38.25	38.35	38.45	38.55	38.65	38.75	38.85	38.95	39.05	39.15	39.25	39.35	39.45	39.55	39.65	39.75	39.85	39.95	40.05	40.15	40.25	40.35	40.45	40.55	40.65	40.75	40.85	40.95	41.05	41.15	41.25	41.35	41.45	41.55	41.65	41.75	41.85	41.95	42.05	42.15	42.25	42.35	42.45	42.55	42.65	42.75	42.85	42.95	43.05	43.15	43.25	43.35	43.45	43.55	43.65	43.75	43.85	43.95	44.05	44.15	44.25	44.35	44.45	44.55	44.65	44.75	44.85	44.95	45.05	45.15	45.25	45.35	45.45	45.55	45.65	45.75	45.85	45.95	46.05	46.15	46.25	46.35	46.45	46.55	46.65	46.75	46.85	46.95	47.05	47.15	47.25	47.35	47.45	47.55	47.65	47.75	47.85	47.95	48.05	48.15	48.25	48.35	48.45	48.55	48.65	48.75	48.85	48.95	49.05	49.15	49.25	49.35	49.45	49.55	49.65	49.75	49.85	49.95	50.05	50.15	50.25	50.35	50.45	50.55	50.65	50.75	50.85	50.95	51.05	51.15	51.25	51.35	51.45	51.55	51.65	51.75	51.85	51.95	52.05	52.15	52.25	52.35	52.45	52.55	52.65	52.75	52.85	52.95	53.05	53.15	53.25	53.35	53.45	53.55	53.65	53.75	53.85	53.95	54.05	54.15	54.25	54.35	54.45	54.55	54.65	54.75	54.85	54.95	55.05	55.15	55.25	55.35	55.45	55.55	55.65	55.75	55.85	55.95	56.05	56.15	56.25	56.35	56.45	56.55	56.65	56.75	56.85	56.95	57.05	57.15	57.25	57.35	57.45	57.55	57.65	57.75	57.85	57.95	58.05	58.15	58.25	58.35	58.45	58.55	58.65	58.75	58.85	58.95	59.05	59.15	59.25	59.35	59.45	59.55	59.65	59.75	59.85	59.95	60.05	60.15	60.25	60.35	60.45	60.55	60.65	60.75	60.85	60.95	61.05	61.15	61.25	61.35	61.45	61.55	61.65	61.75	61.85	61.95	62.05	62.15	62.25	62.35	62.45	62.55	62.65	62.75	62.85	62.95	63.05	63.15	63.25	63.35	63.45	63.55	63.65	63.75	63.85	63.95	64.05	64.15	64.25	64.35	64.45	64.55	64.65	64.75	64.85	64.95	65.05	65.15	65.25	65.35	65.45	65.55	65.65	65.75	65.85	65.95	66.05	66.15	66.25	66.35	66.45	66.55	66.65	66.75	66.85	66.95	67.05	67.15	67.25	67.35	67.45	67.55	67.65	67.75	67.85	67.95	68.05	68.15	68.25	68.35	68.45	68.55	68.65	68.75	68.85	68.95	69.05	69.15	69.25	69.35	69.45	69.55	69.65	69.75	69.85	69.95	70.05	70.15	70.25	70.35	70.45	70.55	70.65	70.75	70.85	70.95	71.05	71.15	71.25	71.35	71.45	71.55	71.65	71.75	71.85	71.95	72.05	72.15	72.25	72.35	72.45	72.55	72.65	72.75	72.85	72.95	73.05	73.15	73.25	73.35	73.45	73.55	73.65	73.75	73.85	73.95	74.05	74.15	74.25	74.35	74.45	74.55	74.65	74.75	74.85	74.95	75.05	75.15	75.25	75.35	75.45	75.55	75.65	75.75	75.85	75.95	76.05	76.15	76.25	76.35	76.45	76.55	76.65	76.75	76.85	76.95	77.05	77.15	77.25	77.35	77.45	77.55	77.65	77.75	77.85	77.95	78.05	78.15	78.25	78.35	78.45	78.55	78.65	78.75	78.85	78.95	79.05	79.15	79.25	79.35	79.45	79.55	79.65	79.75	79.85	79.95	80.05	80.15	80.25	80.35	80.45	80.55	80.65	80.75	80.85	80.95	81.05	81.15	81.25	81.35	81.45	81.55	81.65	81.75	81.85	81.95	82.05	82.15	82.25	82.35	82.45	82.55	82.65	82.75	82.85	82.95	83.05	83.15	83.25	83.35	83.45	83.55	83.65	83.75	83.85	83.95	84.05	84.15	84.25	84.35	84.45	84.55	84.65	84.75	84.85	84.95	85.05	85.15	85.25	85.35	85.45	85.55	85.65	85.75	85.85	85.95	86.05	86.15	86.25	86.35	86.45	86.55	86.65	86.75	86.85	86.95	87.05	87.15	87.25	87.35	87.45	87.55	87.65	87.75	87.85	87.95	88.05	88.15	88.25	88.35	88.45	88.55	88.65	88.75	88.85	88.95	89.05	89.15	89.25	89.35	89.45	89.55	89.65	89.75	89.85	89.95	90.05	90.15	90.25	90.35	90.45	90.55	90.65	90.75	90.85	90.95	91.05	91.15	91.25	91.35	91.45	91.55	91.65	91.75	91.85	91.95	92.05	92.15	92.25	92.35	92.45	92.55	92.65	92.75	92.85	92.95	93.05	93.15	93.25	93.35	93.45	93.55	93.65	93.75	93.85	93.95	94.05	94.15	94.25	94.35	94.45	94.55	94.65	94.75	94.85	94.95	95.05	95.15	95.25	95.35	95.45	95.55	95.65	95.75	95.85	95.95	96.05	96.15	96.25	96.35	96.45	96.55	96.65	96.75	96.85	96.95	97.05	97.15	97.25	97.35	97.45	97.55	97.65	97.75	97.85	97.95	98.05	98.15	98.25	98.35	98.45	98.55	98.65	98.75	98.85	98.95	99.05	99.15	99.25	99.35	99.45	99.55	99.65	99.75	99.85	99.95	100.05	100.15	100.25	100.35	100.45	100.55	100.65	100.75	100.85	100.95	101.05	101.15	101.25	101.35	101.45	101.55	101.65	101.75	101.85	101.95	102.05	102.15	102.25	102.35	102.45	102.55	102.65	102.75	102.85	102.95	103.05	103.15	103.25	103.35	103.45	103.55	103.65	103.75	103.85	103.95	104.05	104.15	104.25	104.35	104.45	104.55	104.65	104.75	104.85	104.95	105.05	105.15	105.25	105.35	105.45	105.55	105.65	105.75	105.85	105.95	106.05	106.15	106.25	106.35	106.45	106.55	106.65	106.75	106.85	106.95	107.05	107.15	107.25	107.35	107.45	107.55	107.65	107.75	107.85	107.95	108.05	108.15	108.25	108.35	108.45	108.55	108.65	108.75	108.85	108.95	109.05	109.15	109.25	109.35	109.45	109.55	109.65	109.75	109.85	109.95	110.05	110.15	110.25	110.35	110.45	110.55	110.65	110.75	110.85	110.95	111.05	111.15	111.25	111.35	111.45	111.55	111.65	111.75	111.85	111.95	112.05	112.15	112.25	112.35	112.45	112.55	112.65	112.75	112.85	112.95	113.05	113.15	113.25	113.35	113.45	113.55	113.65	113.75	113.85	113.95	114.05	114.15	114.25	114.35	114.45	114.55	114.65	114.75	114.85	114.95	115.05	115.15	115.25	115.35	115.45	115.55	115.65	115.75	115.85	115.95	116.05	116.15	116.25	116.35	116.45	116.55	116.65	116.75	116.85	116.95	117.05	117.15	117.25	117.35	117.45	117.55	117.65	117.75	117.85	117.95	118.05	118.15	118.25	118.35	118.45	118.55	118.65	118.75	118.85	118.95	119.05	119.15	119.25	119.35	119.45	119.55	119.65	119.75	119.85	119.95	120.05	120.15	120.25	120.35	120.45	120.55	120.65	120.75	120.85	120.95	121.05	121.15	121.25	121.35	121.45	121.55	121.65	121.75	121.85	121.95	122.05	122.15	122.25
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at the bottom of the rounded plate Y is a depression by which

May 1902

[illegible]

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
H. H. BROWN, CHIEF
DIVISION OF INVESTIGATION, W. C. KODZINSKY, CHIEF

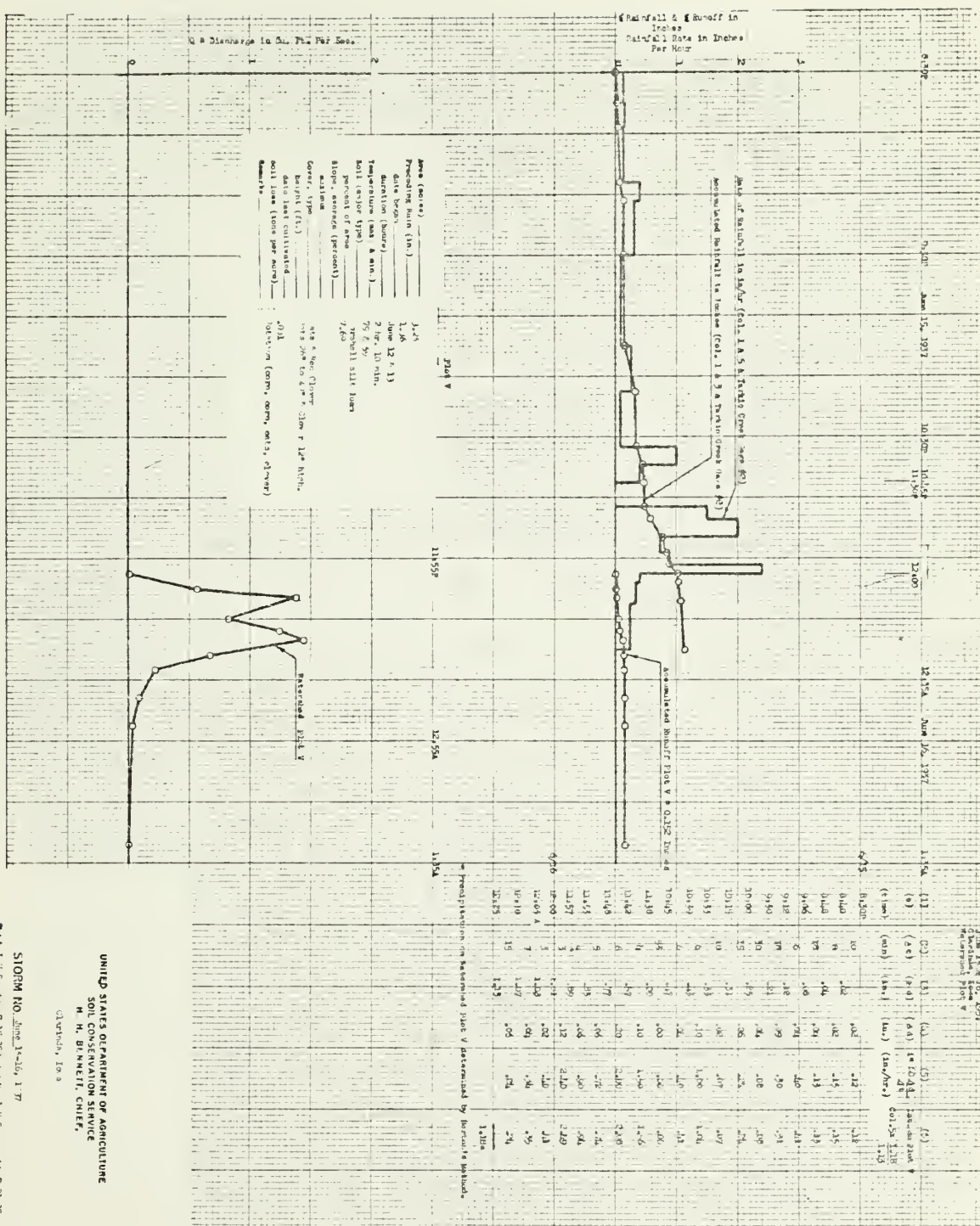
Clark, Tom

June 12-13, 1937

Printed by L. H. 3 67 713/34 - 6. 49 - 71. 21/29

Sheet 3 of 3 sheets

June 15 & 16, 1937
 Watershed Plots V

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

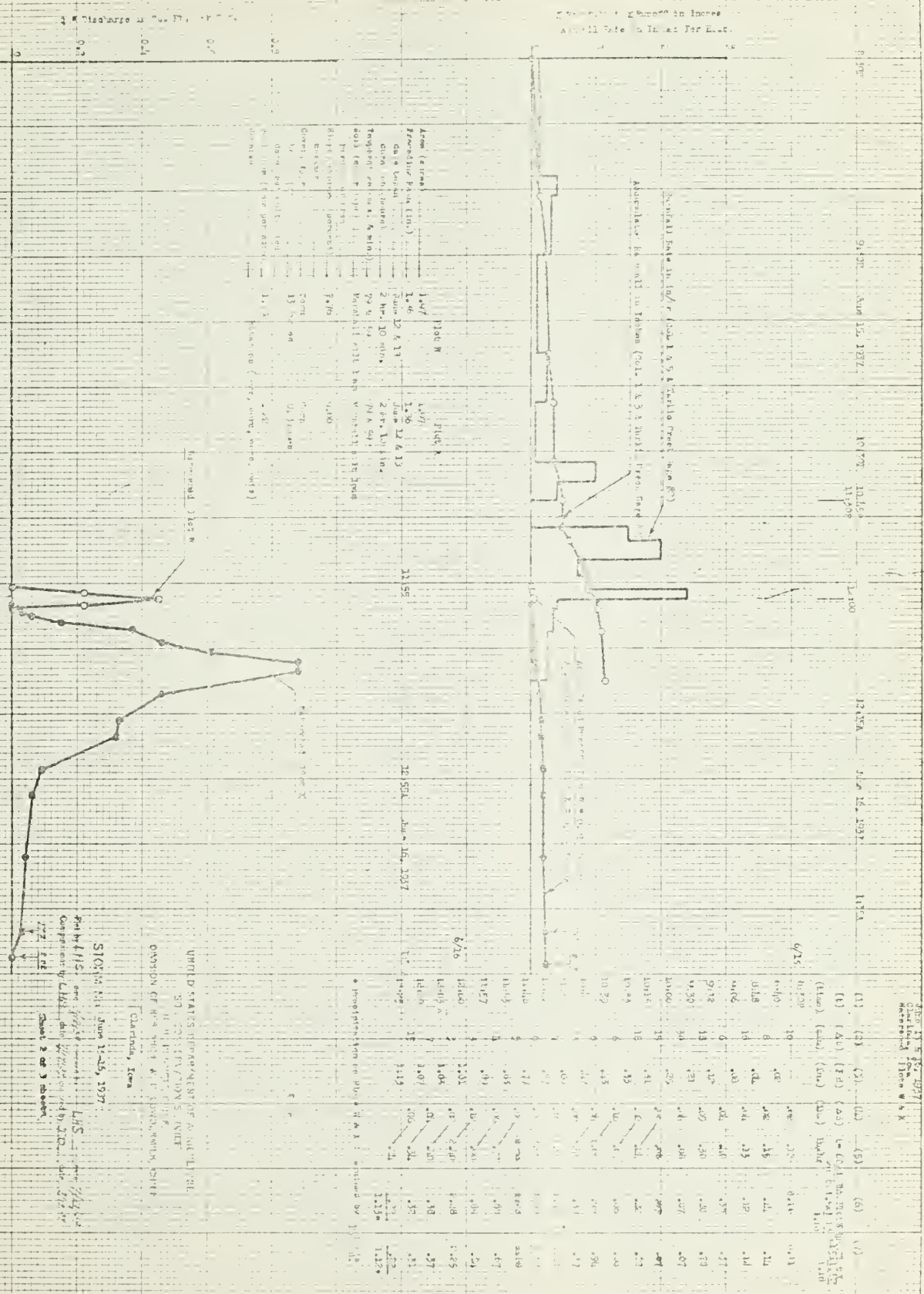
SOIL CONSERVATION SERVICE
M. H. BLANKET, CHIEF

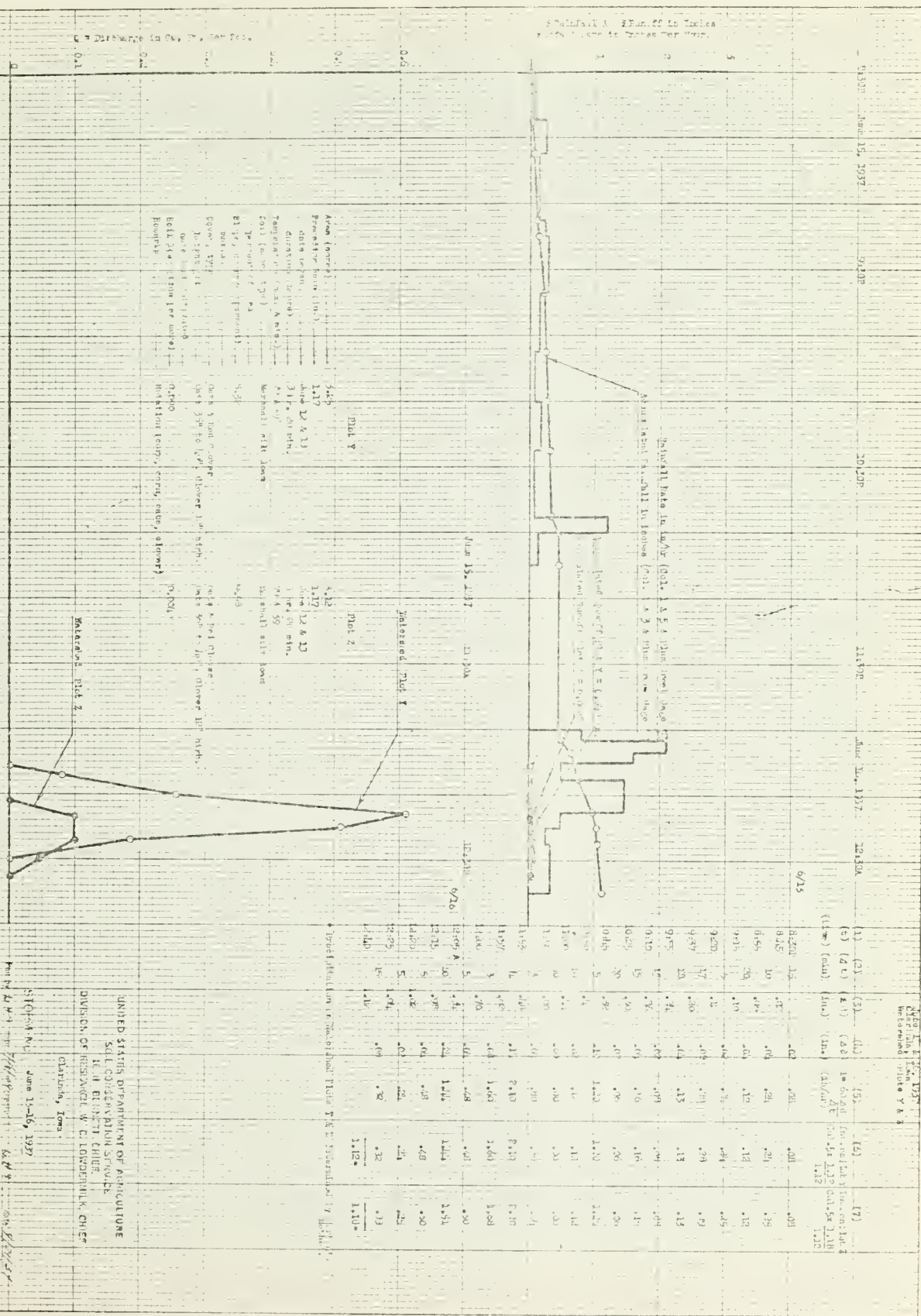
Clurinda, Io. 3

STORM NO. JUNE 15-26, 1977

Put by hand a date $2-11-20$ followed by $\frac{1}{2}$ the date $2-23-20$
 Computations by $1-11-20$ followed by $2-11-20$

Next 1 of 3 alternate





UNITED STATES DEPARTMENT OF AGRICULTURE
Soil Conservation Service
DIVISION OF RESEARCH
COLUMBIA, IOWA

June 15-16, 1937

Field Notes

June 15, 1937

June 16, 1937

June 17, 1937

June 18, 1937

June 19, 1937

June 20, 1937

June 21, 1937

June 22, 1937

June 23, 1937

June 24, 1937

June 25, 1937

June 26, 1937

June 27, 1937

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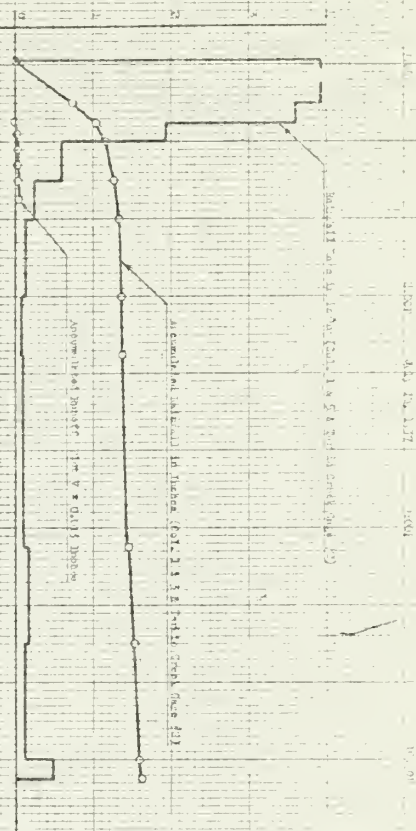
December 28, 1937

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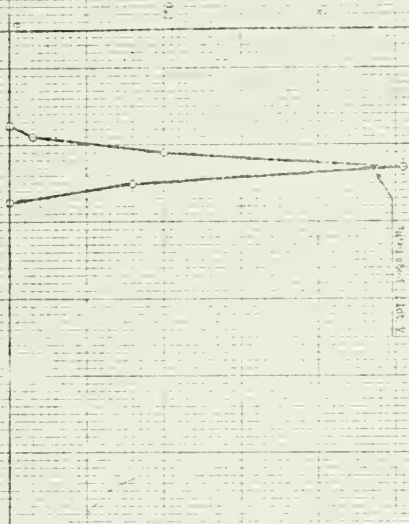
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TRANSPORT & TRADING DISTRICT
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(nm)	(nm)	(nm)	(nm)	(nm)	(nm)
7110	5	25	125	625	3125
7115	5	25	125	625	3125
7120	5	25	125	625	3125
7125	5	25	125	625	3125
7130	5	25	125	625	3125
7135	5	25	125	625	3125
7140	5	25	125	625	3125
7145	5	25	125	625	3125
7150	5	25	125	625	3125
7155	5	25	125	625	3125
7160	5	25	125	625	3125
7165	5	25	125	625	3125
7170	5	25	125	625	3125
7175	5	25	125	625	3125
7180	5	25	125	625	3125
7185	5	25	125	625	3125
7190	5	25	125	625	3125
7195	5	25	125	625	3125
7200	5	25	125	625	3125

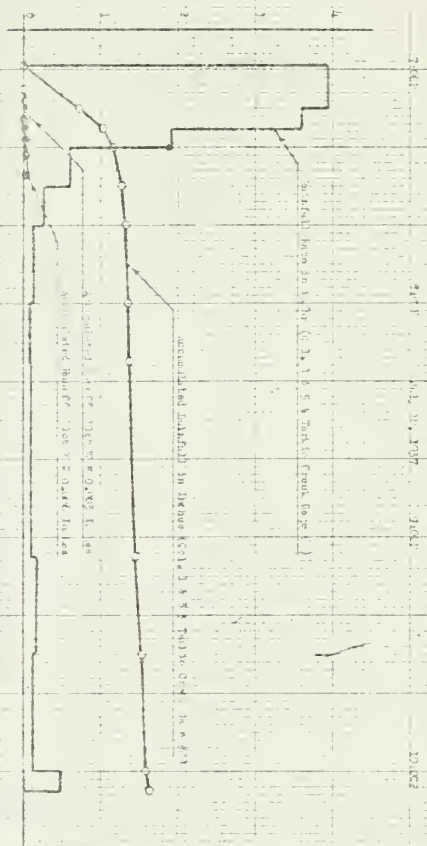
UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
H. M. BENNETT, CHIEF
DIVISION OF INVESTIGATION, W. C. LONDAWELL, CHIEF

Clayton, Tom

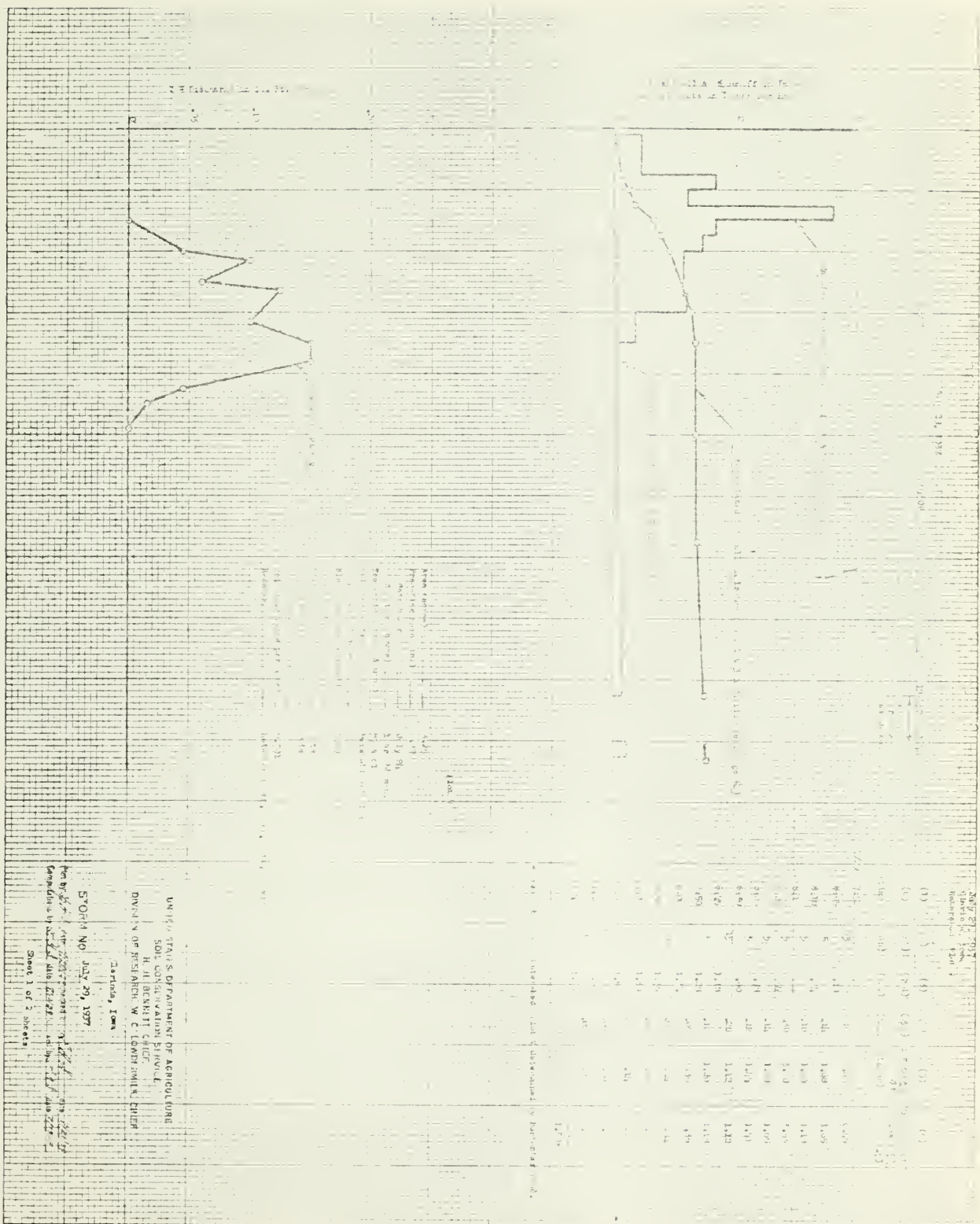
STORM NO. July 18, 1937

from my L&S.	then 2/12/97 - the knot is	L&S	then 2/21/97
compositions by L&S 2 + 4	note 2/21/97 - knot is still by L&S		then 2/26/97

Sheet 1 of 21. 1928

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Sheet 2 of 2 sheets



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TABLE I Thermal and Mechanical Properties of Polyimides									
Sample	Inherent Viscosity (dl/g)	T_g (°C)	T_d (°C)	Char Yield (%)	Thermal Stability		Mechanical Properties		Tensile Strength (MPa)
					Weight Loss (%)	Residual Weight (%)	Tensile Modulus (GPa)	Elongation at Break (%)	
P-1	0.45	245	450	45	10	90	1.2	5.0	100
P-2	0.48	250	460	48	12	88	1.3	5.2	110
P-3	0.50	255	470	50	15	85	1.4	5.5	120
P-4	0.52	260	480	52	18	82	1.5	5.8	130
P-5	0.55	265	490	55	20	80	1.6	6.0	140
P-6	0.58	270	500	58	22	78	1.7	6.2	150
P-7	0.60	275	510	60	25	75	1.8	6.5	160
P-8	0.62	280	520	62	28	72	1.9	6.8	170
P-9	0.65	285	530	65	30	70	2.0	7.0	180
P-10	0.68	290	540	68	32	68	2.1	7.2	190
P-11	0.70	295	550	70	35	65	2.2	7.5	200
P-12	0.72	300	560	72	38	62	2.3	7.8	210
P-13	0.75	305	570	75	40	60	2.4	8.0	220
P-14	0.78	310	580	78	42	58	2.5	8.2	230
P-15	0.80	315	590	80	45	55	2.6	8.5	240
P-16	0.82	320	600	82	48	52	2.7	8.8	250
P-17	0.85	325	610	85	50	50	2.8	9.0	260
P-18	0.88	330	620	88	52	48	2.9	9.2	270
P-19	0.90	335	630	90	55	45	3.0	9.5	280
P-20	0.92	340	640	92	58	42	3.1	9.8	290
P-21	0.95	345	650	95	60	40	3.2	10.0	300
P-22	0.98	350	660	98	62	38	3.3	10.2	310
P-23	1.00	355	670	100	65	35	3.4	10.5	320
P-24	1.02	360	680	102	68	32	3.5	10.8	330
P-25	1.05	365	690	105	70	30	3.6	11.0	340
P-26	1.08	370	700	108	72	28	3.7	11.2	350
P-27	1.10	375	710	110	75	25	3.8	11.5	360
P-28	1.12	380	720	112	78	22	3.9	11.8	370
P-29	1.15	385	730	115	80	20	4.0	12.0	380
P-30	1.18	390	740	118	82	18	4.1	12.2	390
P-31	1.20	395	750	120	85	15	4.2	12.5	400
P-32	1.22	400	760	122	88	12	4.3	12.8	410
P-33	1.25	405	770	125	90	10	4.4	13.0	420
P-34	1.28	410	780	128	92	8	4.5	13.2	430
P-35	1.30	415	790	130	95	5	4.6	13.5	440
P-36	1.32	420	800	132	98	3	4.7	13.8	450
P-37	1.35	425	810	135	100	2	4.8	14.0	460
P-38	1.38	430	820	138	102	1	4.9	14.2	470
P-39	1.40	435	830	140	105	0	5.0	14.5	480
P-40	1.42	440	840	142	108	0	5.1	14.8	490
P-41	1.45	445	850	145	110	0	5.2	15.0	500

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
H. H. LIVINGSTON OFFICE
DIVISION OF RESEARCH, W. B. LOWERY, CHIEF

Clairinda, Iowa

July 24, 1937

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Sheet 2 of 2 sheets

UNITED STATES DEPARTMENT OF AGRICULTURE
 SOIL CONSERVATION SERVICE
 DIVISION OF RESEARCH

HUGLEY, Carlinda, Iowa

RECORD OF SINGLE STORMS AND THEIR RUN OFFS ON VARIOUS WATERSHEDS

 MONTH March & April, 1938
 SHEET 1 OF 9 SHEETS

Date	V. ATTEMPTED			RAINFALL										TEMPERATURE (degrees)			RUN-OFF				RAINFALL MEASUREMENTS (inches)		RIFT POND (cfs. per acre)		CONTRIBUTION OF WATERSHED
	Plot No.	Area (acres)	Gage No.	Therm. (hour)	Duration (minutes)	Amount (inches)	MATURED INVENTORY			Maximum	Minimum	Peak (hour)	Total (hour)	Amount (inches)	MATURED FLOW		Rainfall Meas. (inches)	Rift Pond (cfs. per acre)							
							6 inches (inches per hour)	15 minutes (inches per hour)	30 minutes (inches per hour)						Cu ft. sec.	Time									
3/9/38	Plot V " W " X " Y " Z	3.25 1.97 1.97 3.25 3.12	Tark.2 " " " " Tark.1 Plum.2 Tark.1	2:30A " " " " 7:00P 2:30A 7:00P	810 810 810 875 810 875	.56 .56 .56 .36 .61 .36	.15 .15 .15 .12 .36 .12	.16 .16 .16 .16 .16 .12	.12 .12 .12 .12 .12 .10	53 53 53 53 53 53	31 31 31 31 31 31			None -10- -10- -10- -10- -10-			0.56 .56 .56 .61 .61 .61	None -10- -10- -10- -10- -10-							
4/5/38	Plot V " W " X " Y " Z	3.25 1.97 1.97 3.25 3.12	Tark.2 " " " " Plum.2 Tark.2 Tark.1 Plum.2	2:15P " " " " 2:10P 2:10P 2:10P 2:10P	95 95 95 110 95 110 100	.28 .28 .28 .35 .28 .35 .26	Clock not operating properly			46 46 46 46 46 46 46	31 31 31 31 31 31 31			None -10- -10- -10- -10- -10- -10-			.28 .28 .28 .35 .35 .35 .35	None -10- -10- -10- -10- -10- -10-							
4/6/38	Plot V " W " X " Y " Z	3.25 1.97 1.97 3.25 3.12	Tark.2 " " " " Plum.2 Tark.2 Tark.1 Plum.2	4:20A " " " " 4:15A 4:20A 4:12A 4:15A	150 150 150 150 133 150 133	.32 .32 .32 .30 .32 .30 .30	Clock not operating properly			36 36 36 36 36 36 36	28 28 28 28 28 28 28			None -10- -10- -10- -10- -10- -10-			.32 .32 .32 .32 .32 .32 .32	None -10- -10- -10- -10- -10- -10-							
4/15/38	Plot V " W " X " Y " Z	3.25 1.97 1.97 3.25 3.12	Tark.2 " " " " Plum.2 Tark.2 Tark.1 Plum.2	1:10A " " " " 12:55A 1:10A 12:55A 1:10A	165 165 165 165 165 165 165	.40 .40 .40 .40 .40 .40 .40	.48 .48 .48 .48 .48 .48 .48	.32 .32 .32 .32 .32 .32 .32	.24 .24 .24 .20 .24 .24 .20	69 69 69 69 69 69 69	54 54 54 54 54 54 54			None -10- -10- -10- -10- -10- -10-			.40 .40 .40 .47 .47 .47 .47	None -10- -10- -10- -10- -10- -10-							

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
DIVISION OF RESEARCH

Project Clairinda, Iowa

RECORD OF SINGLE STORMS AND THEIR RUN-OFFS ON VARIOUS WATERSHEDS

Month April & May, 1938
Sheet 2 of 9 SHEETS

DATE	WATERSHED	Number	Area (acres)	Stage No.	Recon (ft/m)	Duration (minutes)	Amount (inches)	MAXIMUM INTENSITY				TEMPERATURE (degrees F)		WINDSPEED				RAINFALL MINUS (inches)	RTR LOSS (cfs per acre)	CONDITION OF WATERSHED	
								2 minutes (inches per hour)	15 minutes (inches per hour)	30 minutes (inches per hour)	St. minimum (inches per hour)	Maximum	Minimum	Recon (m/sec)	Final (ft/m)	Amount (ft/m)	Cfs. ft. sec				Time
4/16/38		Plot V	3.25	Tark.2	5:15P	200	.68	Clock not operating properly				61	49				0.68	none			
		Plot N	1.97	"	"	200	.69	do				61	49				.69	"			
		Plot X	1.97	"	"	200	.69	do				61	49				.69	"			
		"	3.25	Tark.1	5:00P	205	.72	2.04	1.10	.78	61	49				.70	"				
		"	5:00P	Plum 2	5:15P	200	.68	see above										"			
		"	5:00P	Tark.2	5:00P	205	.72	2.04	1.10	.73								"			
		"	5:00P	Plum 2	5:00P	210	.70	1.14	1.15	.64	61	49				.70	"				
		"	3.12	Tark.1	5:00P	205	.72	2.04	1.10	.78								"			
5/34/38		Plot V	3.25	Tark.2	10:35P	130	1.01	.60	.40	.32	80	45							Ground moist		
		"	1.97	"	"	130	1.01	.60	.40	.32	80	45							Ground moist		
		"	1.97	"	"	130	1.01	.60	.40	.32	80	45									
		"	3.25	Tark.1	10:30P	145	1.04	.60	.40	.32	80	45							Ground moist		
		"	3.25	Plum 2	10:30P	130	1.01	.60	.40	.32	80	45									
		"	3.25	Tark.2	10:30P	145	1.04	.60	.40	.32	80	45									
		"	3.12	Plum 2	10:30P	130	1.01	.60	.40	.32	80	45									
		"	3.12	Tark.1	10:30P	145	1.04	.60	.40	.32	80	45									
5/14/38		Plot V	3.25	Tark.2	8:05A	325	.99	.48	.48	.46	63	45							Ground 2" & sweet clover 3 1/2" high		
		"	1.97	"	"	325	.99	.48	.48	.46	63	45							Ground 1" high-ground moisture		
		"	1.97	"	"	325	.99	.48	.48	.46	63	45									
		"	3.25	Tark.1	8:10A	305	.97	.60	.60	.54	63	45									
		"	3.25	Plum 2	8:05A	325	.98	Page not operating properly				63	45						Ground 1" & sweet clover 3 1/2" high		
		"	3.25	Tark.2	8:10A	305	.99	.48	.48	.46	63	45									
		"	3.12	Tark.1	8:10A	305	.97	.60	.60	.54	63	45									
		"	3.12	Plum 2	8:05A	325	.98	.60	.60	.54	63	45									
		"	3.12	Tark.1	8:10A	305	.97	.60	.60	.54	63	45									
5/16/38		Plot V	3.25	Tark.2	9:35P	205	.66	1.35	1.28	.84	62	40							(Ground wet		
		"	1.97	"	"	205	.66	1.35	1.28	.84	62	40							Ground 5" & sweet clover 1 1/2" high		
		"	1.97	"	"	205	.66	1.35	1.28	.84	62	40							No hydrograph. Data 5" high		
		"	3.25	Tark.1	9:55P	260	.63	1.32	1.04	.72	62	40									
		"	3.25	Plum 2	9:35P	265	.66	1.35	1.28	.84	62	40									
		"	3.12	Tark.1	9:55P	260	.63	1.32	1.04	.72	62	40									
		"	3.12	Plum 2	9:35P	260	.65	1.32	1.04	.72	62	40									
		"	3.12	Tark.1	9:55P	260	.63	1.32	1.04	.72	62	40									

RECORD OF SINGLE STORMS AND THEIR RUN-OFFS ON VARIOUS WATERSHEDS

MONTH May, 19 28
SHEET 3 OF 9 SHEETS

Project - Clarinda, Iowa

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UNITED STATES DEPARTMENT OF AGRICULTURE
 SOIL CONSERVATION SERVICE
 DIVISION OF RESEARCH
Project Charlotte, Iowa

RECORD OF SINGLE STORMS AND THEIR RUN-OFFS ON VARIOUS WATERSHEDS

 Month June & July, 19 38
 Sheet 5 of 9 SHEETS

DATE	WATERSHED	Area (acres)	Obs. No.	Reg. no. (feet)	Duration (minutes)	Amount (inches)	MAKING TENDENCY			FALLING TENDENCY		RISING			Barometric Pressure (inches)	Excess (feet per inch)	Comments or W. Assessment		
							3 minutes (inches per hour)	15 minutes (inches per hour)	30 minutes (inches per hour)	Maximum	Minimum	Hours	Feet	Amount (inches)				MAKING RATE	
																		Cu. Ft. sec.	Time
6/14/38	Plot Y	3.25	Dark. 2	6:20	85	.20	.18	.40	.26	88	62					0.28	None		
	" X	1.97	Dark. 1	6:20	85	.28	.18	.40	.26	88	62					.28	None		
	" Y	3.25	Dark. 1	6:20P	100	.30	.35	.28	.21	88	62					.29	None		
	" Z	3.12	Dark. 2	6:20P	100	.28	.18	.40	.26	88	62					.29	None		
	" Z	3.12	Dark. 1	6:05P	100	.29	.36	.28	.21	88	62					.29	None		
7/11/38	Plot Y	3.25	Dark. 2	12:10A	170	.63	1.20	.96	.60	84	61					.63	None		
	" X	1.97	Dark. 1	12:10A	170	.63	1.20	.96	.60	84	61					.63	None		
	" Y	3.25	Dark. 2	12:10A	170	.63	1.32	.96	.60	84	61					.60	None		
	" Z	3.12	Dark. 1	12:10A	170	.65	1.32	.96	.60	84	61					.60	None		
	" Z	3.12	Dark. 1	12:10A	170	.65	1.32	.96	.60	84	61					.60	None		
7/26/38	Plot Y	3.25	Dark. 2	9:15A	122	.25	.84	.44	.24	89	65					.25	None		
	" X	1.97	Dark. 1	9:15A	122	.25	.84	.44	.24	89	65					.25	None		
	" Y	3.25	Dark. 2	9:15A	122	.27	.84	.44	.24	89	65					.27	None		
	" Z	3.12	Dark. 1	9:15A	103	.27	.84	.44	.24	89	65					.27	None		
	" Z	3.12	Dark. 2	9:15A	103	.22	.84	.44	.24	89	65					.27	None		
7/30/38	Plot Y	3.25	Dark. 2	11:17A	18	.30	1.20	1.00	.60	84	61					.30	None		
	" X	1.97	Dark. 1	11:17A	18	.30	1.20	1.00	.60	84	61					.30	None		
	" Y	3.25	Dark. 2	11:17A	18	.26	1.20	.88	.52	84	61					.26	None		
	" Z	3.12	Dark. 1	11:07A	18	.30	1.20	.88	.52	84	61					.26	None		
	" Z	3.12	Dark. 2	11:07A	18	.26	1.20	.88	.52	84	61					.26	None		

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
DIVISION OF RESEARCH

Project Clarenda, Iowa

RECORD OF SINGLE STORMS AND THEIR RUN-OFFS ON VARIOUS WATERSHEDS

Month August, 19 38
Sheet 6 OF 9 SHEETS

Date	Watershed Number	Area (acres)	Gage No.	Height (feet)	Duration (minutes)	Amount (inches)	Maximum Intensity			Turbidity		Begin (hour)	End (hour)	Amount (inches)	Maximum Rate		Rainfall (inches)	Silt Loss (tons per acre)	Condition of Watershed
							3 minutes (inches per hour)	15 minutes (inches per hour)	30 minutes (inches per hour)	Maximum	Minimum				Cu Ft. per Sec.	Time			
							(8)	(9)	(10)	(11)	(12)				(13)	(14)			
8/6/38	Plot Y	3.25	Tark.2	2:21A	116	.59	2.10	1.28	.78	93	64			None			0.59	None	
	" W	1.97	-do-	-do-	116	.59	2.10	1.28	.78	93	64			-do-			.59	-do-	
	" X	1.97	-do-	-do-	116	.59	2.10	1.28	.78	93	64			-do-			.59	-do-	
	" Y	3.25	Tark.1	2:25A	275	.64	1.64	1.12	.72	93	64			-do-			.60	-do-	
	" Z	3.12	Plum 2	2:21A	116	.59	2.10	1.28	.78					-do-					
	" 2	3.12	Tark.1	2:25A	275	.64	1.64	1.12	.72	93	64			-do-			.60	-do-	
	" 2	3.12	Plum 2	2:21A	117	.60	1.68	1.12	.72					-do-					
	" 2	3.12	Tark.1	2:25A	275	.64	1.64	1.28	.78					-do-					
8/7/38	Plot Y	3.25	Tark.2	7:20P	30	.41	1.44	1.24	.82	92	68			None			.41	None	
	" W	1.97	-do-	-do-	30	.41	1.44	1.24	.82	92	68			-do-			.41	-do-	
	" X	1.97	-do-	-do-	30	.41	1.44	1.24	.82	92	68			-do-			.41	-do-	
	" Y	3.25	Tark.1	7:15P	30	.25	1.20	.72	.48	92	68			-do-			.35	-do-	
	" Y	3.25	Plum 2	7:16P	34	.41	1.08	.60	.82					-do-					
	" Y	3.25	Tark.2	7:20P	30	.45	1.44	1.24	.82	92	68			-do-			.35	-do-	
	" Z	3.12	Tark.1	7:15P	30	.25	1.20	.72	.48					-do-					
	" Z	3.12	Plum 2	7:16P	34	.45	1.08	.60	.82					-do-					
	" Z	3.12	Tark.1	7:15P	30	.25	1.20	.80	.58	92	68			-do-			.35	-do-	
8/11/38	Plot Y	3.25	Tark.2	7:20P	270	.63	1.44	.76	.54	96	76			None			.63	None	
	" W	1.97	-do-	-do-	270	.63	1.44	.76	.54	96	76			-do-			.63	-do-	
	" X	1.97	-do-	-do-	270	.63	1.44	.76	.54	96	76			-do-			.63	-do-	
	" Y	3.25	Tark.1	7:20P	270	.58	.84	.80	.54	96	76			-do-			.59	-do-	
	" Y	3.25	Plum 2	7:20P	270	.59	1.08	.60	.54					-do-					
	" Y	3.25	Tark.2	7:20P	270	.63	.84	.76	.54					-do-					
	" Z	3.12	Tark.1	7:20P	270	.58	.84	.80	.54	96	76			-do-			.59	-do-	
	" Z	3.12	Plum 2	7:20P	270	.59	1.08	.60	.54					-do-					
	" Z	3.12	Tark.1	7:20P	270	.58	.84	.80	.54					-do-					
8/20/38	Plot Y	3.25	Tark.2	2:21P	256	2.21	6.00	3.28	1.98	85	60	4:30P	4:46P	0.0016	0.045	4:30P	2.21	.002	Sweet Clover 2 1/2" high. Ground moist.
	" W	1.97	-do-	-do-	256	2.21	6.00	3.28	1.98	85	60	3:43P	3:54P	.001	.015	3:43P	2.21	.114	Out stubble. Ground moist.
	" X	1.97	-do-	-do-	256	2.21	6.00	3.28	1.98	85	60			None				None	
	" Y	3.25	Tark.1	2:21P	291	2.22	5.52	3.20	2.05	85	60			-do-			2.15	-do-	
	" Y	3.25	Plum 2	2:21P	273	2.15	6.00	3.20	1.98					-do-					
	" Z	3.12	Tark.1	2:21P	291	2.22	5.52	3.20	2.05					-do-					
	" Z	3.12	Plum 2	2:21P	273	2.15	6.00	3.20	1.98					-do-					
	" Z	3.12	Tark.1	2:21P	291	2.22	5.52	3.20	2.05	85	60	2:20P	4:30P	.006	.06	4:25P	2.14	Trace	Sweet Clover 2 1/2" high. Ground moist.

RECORD OF SINGLE STORMS AND THEIR RUN-OFFS ON VARIOUS WATERSHEDS

MONTH August & September, 19 38
SHEET 7 OF 9 SHEETS

Project Clairinda, Iowa

DATE	WATERBUD			RAINFALL										MAXIMUM INTENSITY			7 DAY PERIOD (average P.)			RECORD			REMARKS	REMARKS	REMARKS
	Number	Area (Acres)	Code No.	Pressure (Inches)	Duration (minutes)	Amount (Inches)	6 minutes (Inches per hour)	15 minutes (Inches per hour)	30 minutes (Inches per hour)	Maximum	Minimum	Minimum	Mean (Inches)	Peak (Inches)	Amount (Inches)	Ca ft sec	Time	Revised Minutes (Inches)	Net Loss (Inches per hour)						
8/28/38	Plot V	3.25	Tark. 2 1.18 P 217			1.17	2.78	1.36	1.12	80	58				0.003			1.17	0.001	No hydrograph. Sweet Clover. 26" high					
	" W	1.97	-do-			1.17	2.78	1.36	1.12	80	58		3.57P	5.35P	.028	0.10	4.04P	1.17	.010	cat. stable. Ground moist.					
	" X	1.97	-do-			1.17	2.78	1.36	1.12	80	58				None			1.17	None						
	" Y	3.25	Tark. 1 1.23 P 232			1.16	2.28	1.36	1.02	50	58				-do-			1.18	-do-						
	"			Plum 2 1.18 P 212			1.18	2.04	1.16	1.88															
9/5/38	"		Tark. 2 1.18 P 217			1.17	2.78	1.36	1.12																
	" Z	3.12	Plum 2 1.18 P 212			1.18	2.04	1.16	1.88	80	58				-do-			1.18	-do-						
	"		Tark. 1 1.23 P 232			1.16	2.28	1.36	1.02																
	Plot V	3.25	Tark. 2 9.44A			.50	1.80	.92	.52	81	66				.001			.50	Trace	No hydrograph. Sweet Clover 26" high					
	" W	1.97	-do-			.50	1.80	.92	.52	81	66				None			.50	Micro						
9/10/38	" X	1.97	-do-			.53	1.32	.88	.56	81	66				-do-			.51	-do-						
	" Y	3.25	Tark. 1 9.44A			.51	1.32	.88	.56																
	"		Plum 2 9.44A			.50	1.80	.92	.52																
	"		Tark. 2 9.44A			.53	1.32	.84	.56	81	66				-do-			.51	-do-						
	" Z	3.12	Plum 2 9.44A			.53	1.32	.88	.56																
9/10/38	Plot V	3.25	Tark. 2 5.44P			.24	.60	.52	.26	96	67				None			.24	None						
	" W	1.97	-do-			.24	.60	.52	.26	96	67				-do-			.24	-do-						
	" X	1.97	-do-			.24	.60	.52	.26	96	67				-do-			.24	-do-						
	" Y	3.25	Tark. 1 5.38P			.33	1.44	.80	.42																
	"		Plum 2 5.44P			.29	.84	.56	.32	96	67				-do-			.29	-do-						
9/10/38	"		Tark. 2 5.44P			.24	.60	.52	.26																
	"		Tark. 1 5.38P			.33	1.44	.80	.42																
	" Z	3.12	Plum 2 5.38P			.29	.84	.56	.32	96	67				-do-			.29	-do-						
	"		Tark. 1 5.38P			.33	1.44	.80	.42																
	"		Plum 2 5.38P			.29	.84	.56	.32	96	67				-do-			.29	-do-						
9/10/38	Plot V	3.25	Tark. 2 9.30P			1.06	.72	.32	.26	96	65				None			1.06	None						
	" W	1.97	-do-			1.06	.72	.32	.26	96	65				-do-			1.06	-do-						
	" X	1.97	-do-			1.06	.72	.32	.26	96	65				-do-			1.06	-do-						
	" Y	3.25	Tark. 1 9.32P			.99	.24	.20	.20																
	"		Plum 2 9.32P			.96	.48	.20	.12	96	65				-do-			.96	-do-						
9/10/38	"		Tark. 2 9.30P			1.06	.72	.32	.26																
	"		Tark. 1 9.32P			.99	.24	.20	.20																
	"		Plum 2 9.32P			.96	.48	.20	.12	96	65				-do-			.96	-do-						
	" Z	3.12	Plum 2 9.32P			.99	.24	.20	.20	96	65				-do-			.96	-do-						
	"		Tark. 1 9.32P			.96	.48	.20	.12																

RECORD OF SINGLE STORMS AND THEIR RUN-OFFS ON VARIOUS WATERSHEDS

MONTH September & October, 1938
SHEET 8 OF 9 SHEETS

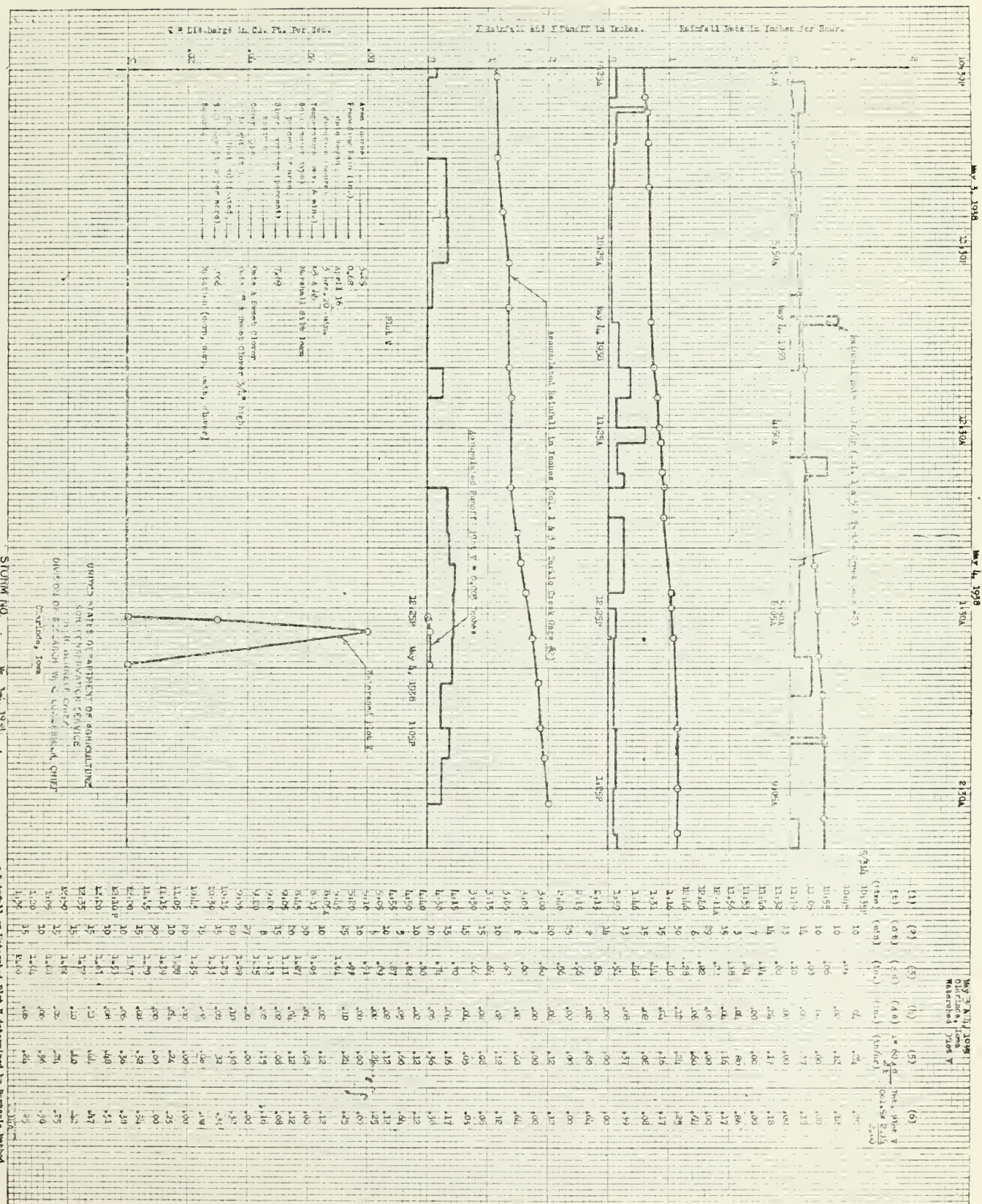
Project - Clarinda, Iowa

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RECORD OF SINGLE STORMS AND THEIR RUN-OFFS ON VARIOUS WATERSHEDS

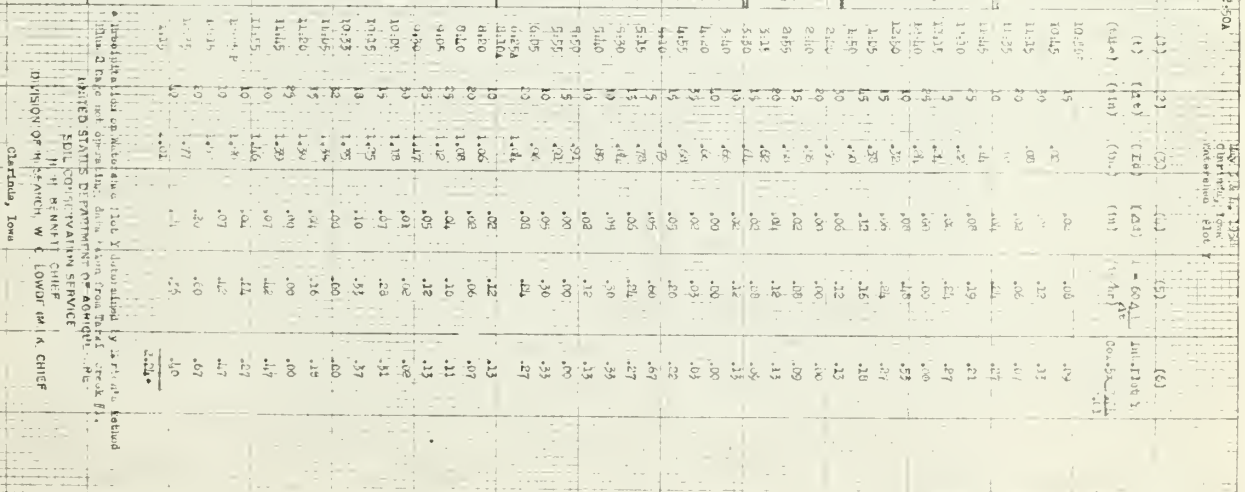
MONTH November, 1938
SHEET 9 OF 9 SHEETS

DATE	WATERSHED	RAINFALL										TEMPERATURE (degrees F.)		WIND				RAINFALL MEASUREMENT		CONDITION OF WATERSHED
		Number	Area (acres)	Gage No.	Begin (hour)	Duration (minutes)	Amount (inches)	MAXIMUM INTENSITY			Maximum (inches per hour)	Direction (degrees per hour)	Speed (m.p.h.)	Force (p.s.f.)	Amount (inches)	Direction (degrees)	Amount (inches)	Direction (degrees)		
								1st (inches per hour)	2nd (inches per hour)	3rd (inches per hour)										
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)		
11/24/30	Pilot	3.25	Tark. 2	9:00P	775	2.08	.18	.10	.36	77	62	2.08	None			2.08	None			
"	"	1.97	-do-	-do-	775	2.08	.18	.10	.36	77	62	2.08	-do-			2.08	-do-			
"	"	1.97	Tark. 1	9:02P	758	2.05	.18	.24	.36	77	62	2.05	-do-			2.05	-do-			
"	"	3.25	Plum 2	9:03P	775	2.08	.18	.10	.36	77	62	2.08	-do-			2.08	-do-			
"	"	3.12	Tark. 1	9:03P	758	2.05	.18	.24	.36	77	62	2.05	-do-			2.05	-do-			
"	"	3.12	Plum 2	9:03P	758	2.02	.18	.24	.36	77	62	2.02	-do-			2.02	-do-			
"	"	3.12	Tark. 1	9:02P	758	2.05	.18	.24	.36	77	62	2.05	-do-			2.05	-do-			
"	"	3.12	Tark. 1	9:02P	758	2.05	.18	.24	.36	77	62	2.05	-do-			2.05	-do-			
"	"	3.12	Tark. 1	9:02P	758	2.05	.18	.24	.36	77	62	2.05	-do-			2.05	-do-			
"	"	3.12	Tark. 1	9:02P	758	2.05	.18	.24	.36	77	62	2.05	-do-			2.05	-do-			
"	"	3.12	Tark. 1	9:02P	758	2.05	.18	.24	.36	77	62	2.05	-do-			2.05	-do-			
"	"	3.12	Tark. 1	9:02P	758	2.05	.18	.24	.36	77	62	2.05	-do-			2.05	-do-			
"	"	3.12	Tark. 1	9:02P	758	2.05	.18	.24	.36	77	62	2.05	-do-			2.05	-do-			
"	"	3.12	Tark. 1	9:02P	758	2.05	.18	.24	.36	77	62	2.05	-do-			2.05	-do-			
"	"	3.12	Tark. 1	9:02P	758	2.05	.18	.24	.36	77	62	2.05	-do-			2.05	-do-			
"	"	3.12	Tark. 1	9:02P	758	2.05	.18	.24	.36	77	62	2.05	-do-			2.05	-do-			
"	"	3.12	Tark. 1	9:02P	758	2.05	.18	.24	.36	77	62	2.05	-do-			2.05	-do-			
"	"	3.12	Tark. 1	9:02P	758	2.05	.18	.24	.36	77	62	2.05	-do-			2.05	-do-			
"	"	3.12	Tark. 1	9:02P	758	2.05	.18	.24	.36	77	62	2.05	-do-			2.05	-do-			
"	"	3.12	Tark. 1	9:02P	758	2.05	.18	.24	.36	77	62	2.05	-do-			2.05	-do-			
"	"	3.12	Tark. 1	9:02P	758	2.05	.18	.24	.36	77	62	2.05	-do-			2.05	-do-			
"	"	3.12	Tark. 1	9:02P	758	2.05	.18	.24	.36	77	62	2.05	-do-			2.05	-do-			
"	"	3.12	Tark. 1	9:02P	758	2.05	.18	.24	.36	77	62	2.05	-do-			2.05	-do-			
"	"	3.12	Tark. 1	9:02P	758	2.05	.18	.24	.36	77	62	2.05	-do-			2.05	-do-			
"	"	3.12	Tark. 1	9:02P	758	2.05	.18	.24	.36	77	62	2.05	-do-			2.05	-do-			
"	"	3.12	Tark. 1	9:02P	758	2.05	.18	.24	.36	77	62	2.05	-do-			2.05	-do-			
"	"	3.12	Tark. 1	9:02P	758	2.05	.18	.24	.36	77	62	2.05	-do-			2.05	-do-			
"	"	3.12	Tark. 1	9:02P	758	2.05	.18	.24	.36	77	62	2.05	-do-			2.05	-do-			
"	"	3.12	Tark. 1	9:02P	758	2.05	.18	.24	.36	77	62	2.05	-do-			2.05	-do-			
"	"	3.12	Tark. 1	9:02P	758	2.05	.18	.24	.36	77	62	2.05	-do-			2.05	-do-			
"	"	3.12	Tark. 1	9:02P	758	2.05	.18	.24	.36	77	62	2.05	-do-			2.05	-do-			
"	"	3.12	Tark. 1	9:02P	758	2.05	.18	.24	.36	77	62	2.05	-do-			2.05	-do-			
"	"	3.12	Tark. 1	9:02P	758	2.05	.18	.24	.36	77	62	2.05	-do-			2.05	-do-			
"	"	3.12	Tark. 1	9:02P	758	2.05	.18	.24	.36	77	62	2.05	-do-			2.05	-do-			
"	"	3.12	Tark. 1	9:02P	758	2.05	.18	.24	.36	77	62	2.05	-do-			2.05	-do-			
"	"	3.12	Tark. 1	9:02P	758	2.05	.18	.24	.36	77	62	2.05	-do-			2.05	-do-			
"	"	3.12	Tark. 1	9:02P	758	2.05	.18	.24	.36	77	62	2.05	-do-			2.05	-do-			
"	"	3.12	Tark. 1	9:02P	758	2.05	.18	.24	.36	77	62	2.05	-do-			2.05	-do-			
"	"	3.12	Tark. 1	9:02P	758	2.05	.18	.24	.36	77	62	2.05	-do-			2.05	-do-			
"	"	3.12	Tark. 1	9:02P	758	2.05	.18	.24	.36	77	62	2.05	-do-			2.05	-do-			
"	"	3.12	Tark. 1	9:02P	758	2.05	.18	.24	.36	77	62	2.05	-do-			2.05	-do-			
"	"	3.12	Tark. 1	9:02P	758	2.05	.18	.24	.36	77	62	2.05	-do-			2.05	-do-			
"	"	3.12	Tark. 1	9:02P	758	2.05	.18	.24	.36	77	62	2.05	-do-			2.05	-do-			
"	"	3.12	Tark. 1	9:02P	758	2.05	.18	.24	.36	77	62	2.05	-do-			2.05	-do-			
"	"	3.12	Tark. 1	9:02P	758	2.05	.18	.24	.36	77	62	2.05	-do-			2.05	-do-			
"	"	3.12	Tark. 1	9:02P	758	2.05	.18	.24	.36	77	62	2.05	-do-			2.05	-do-			
"	"	3.12	Tark. 1	9:02P	758	2.05	.18	.24	.36	77	62	2.05	-do-			2.05	-do-			
"	"	3.12	Tark. 1	9:02P</																



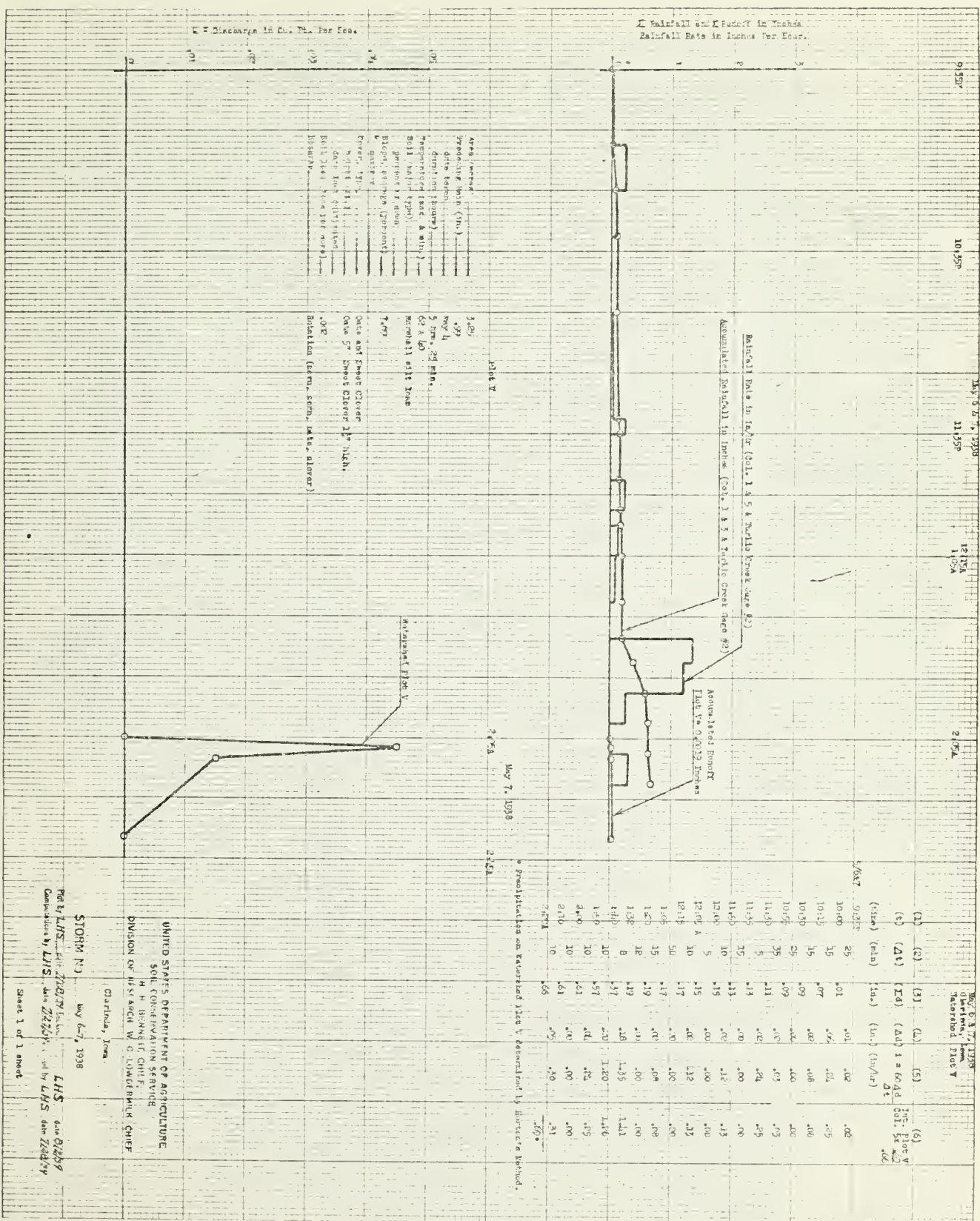
* Rainfall on Watershed Plot V determined by Horton's method

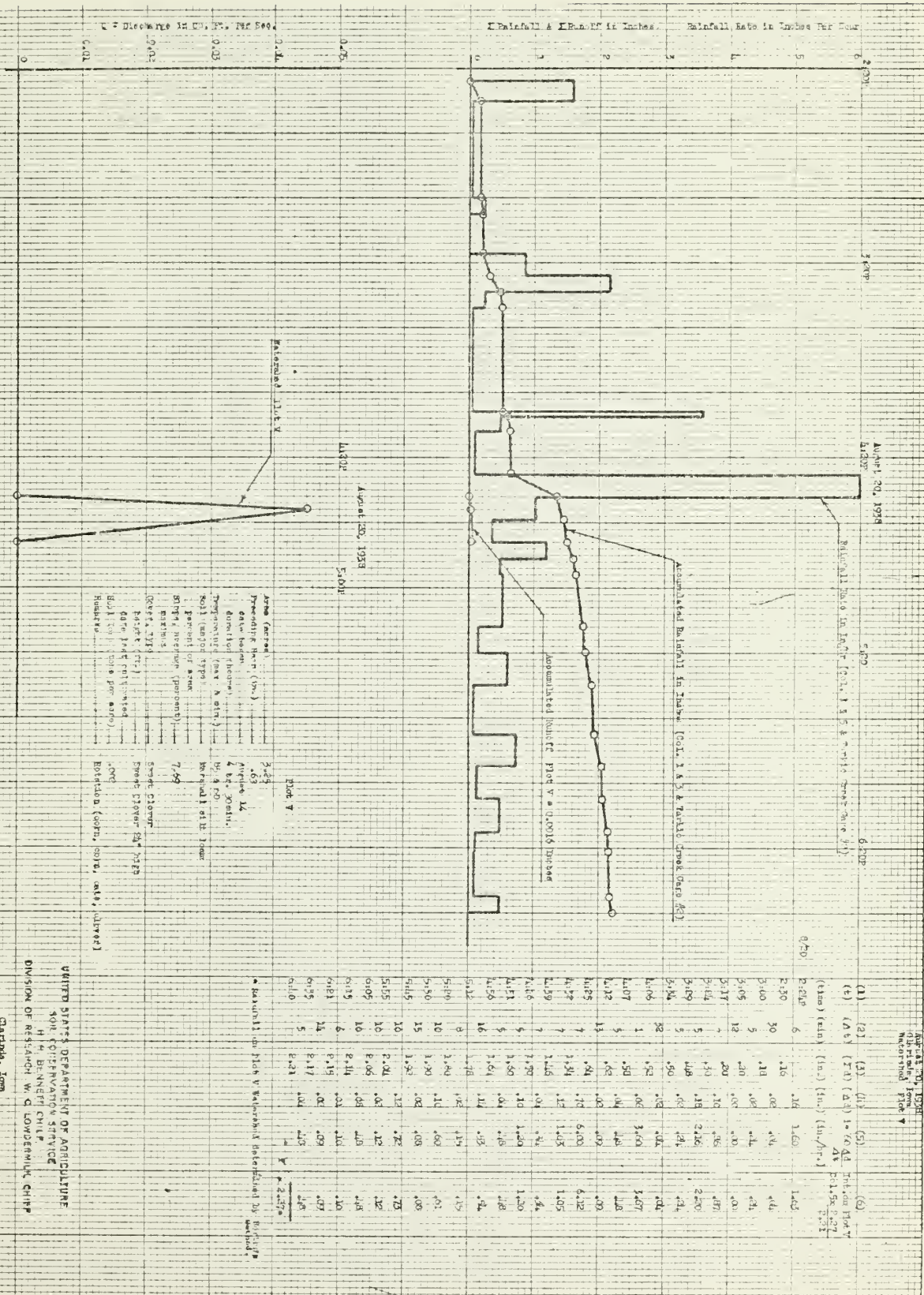




STORM NO. 24, 1938.
 7911148, 010 721.94 cm. LHS. dia 21.67
 Computed by L.H.S. and Spencer by William de Vries
 Sheet 3 of 3 sheets

MAY 6 & 7, 1938
WATERSHED PLOT V



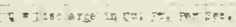


Clark, Tom

STORM NO. 100, Aug. 20, 1938

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
H. H. BENNETT CHIEF
DIVISION OF RESEARCH W. C. LOWDERMILK CHIEF

Sheet 1 of 3 sheets



◆ Reinforced concrete flat is characterized by

Sheet 2 of 3 sheets

Reserve

1.96

Ad6TP

31

suppl

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
Washington, D. C.
H. H. Bennett, Chief

HYDROLOGIC STUDIES

COMPILATION OF
RAINFALL AND RUN-OFF FROM THE WATERSHEDS
OF THE MISSOURI VALLEY LOESS REGION
CONSERVATION EXPERIMENT STATION
CLARINDA, IOWA

1939

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PROCUREMENT SECTION
CURRENT SERIAL RECORDS

by

L. H. Schoenleber, Assistant Agricultural Engineer
Clarinda, Iowa

Prepared under the direction of
C. E. Ramsor, Chief, Hydrologic Division

Office of Research
November, 1940

(See SCS-TP-31 for description of wet rebeds)

This report is #31 suppl.

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UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
DIVISION OF RESEARCH

MONTH Feb., Mar., Apr., 1939
SHEET 1 OF 8 SHEETS

RECORD OF SINGLE STORMS AND THEIR RUN-OFFS ON VARIOUS WATERSHEDS

Project Clarinda, Iowa

WATERSHED			RAINFALL					TERRAIN			REPORT				RAINFALL MONTH	PER LOSS	CONDITION OF WATERSHED
DATE	NUMBER	AREA (ACRES)	CLASS NO.	THICKNESS (INCHES)	MAXIMUM FLOW			AMOUNT (CUBIC FEET)	MINIMUM	MAXIMUM	PERCENT (PERCENT)	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT
					5 minutes (feet per hour)	15 minutes (feet per hour)	30 minutes (feet per hour)										
1939																	
Feb. 2	Plot V	3.25	Cardio 2 10:00A	100	0.42	0.36	0.28	0.26	10	5		None			0.42	None	
	"	"	"	"	160	.42	.36	.32	.26	18	5	-do-			.42	-do-	
	"	"	"	"	180	.42	.36	.32	.26	18	5	-do-			.42	-do-	
	"	"	"	"	180	.42	.36	.32	.26	18	5	-do-			.42	-do-	
	"	"	"	"	180	.42	.36	.32	.26	18	5	-do-			.42	-do-	
	"	"	"	"	180	.42	.36	.32	.26	18	5	-do-			.42	-do-	
Mar. 11	Plot V	3.25	Cardio 2 5:00P	330	1.60	.60	.60	.60	40	34		None			1.60	None	
	"	"	"	"	330	1.60	.60	.60	.60	40	34	-do-			1.60	-do-	
	"	"	"	"	330	1.60	.60	.60	.60	40	34	-do-			1.60	-do-	
	"	"	"	"	330	1.60	.60	.60	.60	40	34	-do-			1.60	-do-	
	"	"	"	"	330	1.60	.60	.60	.60	40	34	-do-			1.60	-do-	
	"	"	"	"	330	1.60	.60	.60	.60	40	34	-do-			1.60	-do-	
April 4	Plot V	3.25	Cardio 2 3:15P	235	.81	.48	.40	.38	58	41		None			.81	None	
	"	"	"	"	235	.81	.48	.40	.38	58	41	-do-			.81	-do-	
	"	"	"	"	235	.81	.48	.40	.38	58	41	-do-			.81	-do-	
	"	"	"	"	235	.81	.48	.40	.38	58	41	-do-			.81	-do-	
	"	"	"	"	235	.81	.48	.40	.38	58	41	-do-			.81	-do-	
	"	"	"	"	235	.81	.48	.40	.38	58	41	-do-			.81	-do-	
April 10	Plot V	3.25	Cardio 2	21	.21	.24	.24	.24	60	45		None			.21	None	
	"	"	"	"	21	.21	.24	.24	.24	60	45	-do-			.21	-do-	
	"	"	"	"	21	.21	.24	.24	.24	60	45	-do-			.21	-do-	
	"	"	"	"	21	.21	.24	.24	.24	60	45	-do-			.21	-do-	
	"	"	"	"	21	.21	.24	.24	.24	60	45	-do-			.21	-do-	
	"	"	"	"	21	.21	.24	.24	.24	60	45	-do-			.21	-do-	

Project Clasinda, Iowa

RECORD OF SINGLE STORMS AND THEIR RUN-OFFS ON VARIOUS WATERSHEDS

[illegible]

Note

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
DIVISION OF RESEARCH

MONTH June, 1939
SHEET 3 OF 8 SHEETS

RECORD OF SINGLE STORMS AND THEIR RUN-OFFS ON VARIOUS WATERSHEDS

PROJECT Clarinda, Iowa

WATERSHED			RAINFALL										TRANSMITTANCE (inches F)				RUNOFF				RAINFALL MINUS RUNOFF (inches)	SOIL LOSS (tons per acre)	CONDITION OF WATERSHED
DATE	NUMBER	AREA (ACRES)	GAGE NO.	BASIN (SQUARE FEET)	DURATION (MINUTES)	AMOUNT (INCHES)	MAXIMUM INTENSITY (inches per hour)			MAXIMUM	MINIMUM	BASIN (SQUARE FEET)	ZONES (HOURS)	AMOUNT (INCHES)	MATHEMATICAL RATE		CUBIC FT. SEC.	TIME					
							3 MINUTES (inches per hour)	15 MINUTES (inches per hour)	30 MINUTES (inches per hour)														
1939	1	24	CD	(4)	(5)	(6)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)					
June 10	PLOT Y	3.25	Ter-262	3:05A	70	1.32	.80	.80	.70	74	51												
	"	"	"	"	70	1.32	.82	.82	.70	74	51												
	"	"	"	"	70	1.32	.88	.88	.70	74	51												
	"	"	"	"	75	.96	.92	.92	.72														
	"	"	"	"	75	1.32	.96	.96	.78	74	51												
	"	"	"	"	70	1.32	.88	.88	.70														
June 10	PLOT Z	3.12	Ter-261	3:00A	75	.96	.92	.92	.72														
	"	"	"	"	75	1.32	.95	.95	.78	74	51												
	"	"	"	"	75	.96	.92	.92	.72														
	"	"	"	"	32	.87	1.56	.96	.62	74	51												
	"	"	"	"	32	.85	1.56	.96	.62	74	51												
	"	"	"	"	46	.85	1.56	1.04	.62														
June 10	PLOT Y	3.25	Ter-261	8:14A	32	.85	1.80	.96	.58	74	51												
	"	"	"	"	32	.85	1.56	.96	.62														
	"	"	"	"	46	.86	1.80	.96	.58	74	51												
	"	"	"	"	46	.86	1.56	1.04	.62														
	"	"	"	"	90	.63	1.56	.92	.74	71	56												
	"	"	"	"	90	.63	1.56	.92	.74	71	56												
June 13	PLOT Y	3.25	Ter-261	4:30A	105	.65	1.20	1.00	.76	71	56												
	"	"	"	"	95	.65	1.56	.92	.74														
	"	"	"	"	90	.65	1.32	.96	.70														
	"	"	"	"	90	.65	1.56	.92	.74														
	"	"	"	"	105	.65	1.32	.96	.70														
	"	"	"	"	105	.65	1.56	.92	.74														
June 18	PLOT Y	3.25	Ter-261	6:45P	345	1.30	2.83	2.24	1.34	89	63												
	"	"	"	"	345	1.30	2.69	2.24	1.34	89	63												
	"	"	"	"	345	1.30	2.80	2.24	1.34	89	63												
	"	"	"	"	345	1.35	3.12	2.24	1.36														
	"	"	"	"	377	1.14	2.88	1.80	1.00	89	63												
	"	"	"	"	345	1.35	2.88	2.24	1.36														
June 18	PLOT Z	3.12	Ter-261	6:45P	345	1.13	2.88	1.80	1.00	89	63												
	"	"	"	"	377	1.13	2.88	1.80	1.00														
	"	"	"	"	345	1.35	3.12	2.24	1.36														
	"	"	"	"	345	1.35	3.12	2.24	1.36														
	"	"	"	"	345	1.35	3.12	2.24	1.36														
	"	"	"	"	345	1.35	3.12	2.24	1.36														

Runoff retained in silt box.

Runoff retained in silt box.

Runoff retained in silt box.

Runoff retained in silt box.

Runoff retained in silt box.

Runoff retained in silt box.

Runoff retained in silt box.

Runoff retained in silt box.

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
DIVISION OF RESEARCH

MONTH June & July, 19 39
SHEET 4 OF 8 SHEETS

RECORD OF SINGLE STORMS AND THEIR RUN-OFFS ON VARIOUS WATERSHEDS

PROJECT Clarinda, Iowa

S. A. MORTIMER, PROJECT ASSISTANT

Date	Watershed			Rainfall						Temperature (Degree F)		Silt-off				Rainfall Index (Inches)	Step Loss (tons per acre)	Continuation of Watershed	
	Number	Area (acres)	Open No.	Basin (feet)	Duration (minutes)	Amount (Inches)	Maximum Intensity			Maximum	Minimum	Depth (feet)	Flood (feet)	Accretion (Inches)	Maximum Rate				
							2 minutes (Inches per hour)	15 minutes (Inches per hour)	30 minutes (Inches per hour)						Cu. ft. sec.				Time
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)		
June 20, 1939	Plot V	3.25	Part 102	9:55P	352	1.52	2.89	2.28	1.70	77	62	10:03P	3:41A	0.379	2.73	10:20P	1.14	0.412	Corn 22 inches high.
" "	" W	1.97	" "	" "	352	1.58	2.68	2.28	1.78	77	62	10:01P	11:50A	.689	2.48	10:11P	.69	2.544	-do-
" "	" X	1.97	" "	" "	352	1.53	2.68	2.28	1.78	77	62	9:59P	12:00P	.135	.77	10:26P	1.49	.404	-do-
" "	" Y	3.25	Part 101	9:58P	352	1.52	2.16	2.00	1.70	77	62	10:02P	3:40A	.418	3.25	10:05P	1.20	.732	-do-
" "	" Z	3.12	Part 103	9:58P	352	1.51	2.16	2.00	1.70	77	62	10:02P	11:40A	.132	.99	10:26P	1.42	.034	-do-
June 21, 1939	Plot V	3.25	Part 102	8:50P	180	.64	.84	.64	.44	74	52	8:58P	4:50A	.073	.71	9:13P	.57	.025	Corn 24 inches high.
" "	" W	1.97	" "	" "	180	.67	.84	.64	.44	74	52	8:58P	4:20A	.238	.99	9:08P	.37	.726	-do-
" "	" X	1.97	" "	" "	180	.67	.84	.64	.44	74	62	9:02P	4:10A	.004	.10	9:34P	.57	.002	-do-
" "	" Y	3.25	Part 101	8:55P	170	.67	1.08	.75	.54	74	52	9:06P	4:02A	.101	.72	9:14P	.57	.080	-do-
" "	" Z	3.12	Part 101	8:55P	170	.63	1.08	.72	.50	74	62	9:04P	3:40A	.013	.10	9:34P	.53	.004	-do-
June 25, 1939	Plot V	3.25	Part 102	8:00A	125	.56	.36	.32	.26	79	55			None					Corn 28 inches high. Note all runoff retained in silt box.
" "	" W	1.97	" "	" "	135	.54	.36	.32	.26	79	65	5:00A	7:15A	.016	.125	7:14A	.41	.010	
" "	" X	1.97	" "	" "	135	.50	.36	.32	.26	79	65			None			.56	None	
" "	" Y	3.25	Part 101	7:11A	133	.55	.48	.36	.26	79	55			None			.54	None	
" "	" Z	3.12	Part 102	8:00A	125	.55	.48	.32	.26	79	65			None			.54	None	
" "	" Y	3.25	Part 102	7:15A	133	.55	.48	.36	.26	79	65			None					
" "	" Z	3.12	Part 101	8:00A	125	.54	.48	.32	.26	79	65			None					
" "	" Y	3.25	Part 102	7:15A	133	.55	.48	.36	.26	79	65			None					
July 1, 1939	Plot V	3.25	Part 102	8:00A	125	.27	.24	.24	.22	81	61			None			.27	None	
" "	" W	1.97	" "	" "	125	.27	.24	.24	.22	81	51			None			.27	None	
" "	" X	1.97	" "	" "	125	.27	.24	.24	.22	81	61			None			.27	None	
" "	" Y	3.25	Part 101	8:10A	105	.25	.24	.24	.22	81	61			None			.25	None	
" "	" Z	3.12	Part 101	8:10A	105	.25	.24	.24	.22	81	61			None			.25	None	
" "	" Y	3.25	Part 102	8:00A	125	.27	.24	.24	.22	81	61			None					
" "	" Z	3.12	Part 101	8:10A	105	.25	.24	.24	.22	81	61			None					
" "	" Y	3.25	Part 102	8:00A	125	.27	.24	.24	.22	81	61			None					

UNITED STATES DEPARTMENT OF AGRICULTURE
 SOIL CONSERVATION SERVICE
 DIVISION OF RESEARCH

 MONTH July 19 32
 SHEET 5 OF 8 SHEETS

 PROJECT Clarinda, Iowa
 RECORD OF SINGLE STORMS AND THEIR RUN-OFFS ON VARIOUS WATERSHEDS

Date	WATERSHED			RAINFALL				TEMPERATURE (degrees F)			Rise-off				Runoff Meters (inches)	Size Low (cfs per acre)	Condition of Watershed
	Number	Area (acres)	Origin No.	Down (hours)	Duration (minutes)	Amount (inches)	Maximum Intensity			Minimum	Peak (hours)	Flood (hours)	Amount (cfs)				
							15 minutes (inches per hour)	30 minutes (inches per hour)	60 minutes (inches per hour)								
July 3	Plot 3	3.25	Tarbo2	10:30	40	5.04	3.22	2.04	62	62	62	10:30	2.04	2.04	1.03	.501	Corn 51 inches high.
"	"	1.97	"	"	40	5.04	3.22	2.04	62	62	62	"	"	"	.80	2.004	Corn 50 inches high.
"	"	1.97	"	"	40	5.04	3.22	2.04	62	62	62	"	"	"	.80	.025	Corn 42 inches high.
"	"	3.25	Tarbo1	10:40	30	6.24	3.08	1.92	82	82	82	10:40	1.92	1.92	1.11	.142	Corn 60 inches high.
"	"	3.25	Plum 2	10:30	40	5.04	3.22	2.04	62	62	62	"	"	"	"	"	"
"	"	3.25	Tarbo2	10:30	40	5.04	3.22	2.04	62	62	62	"	"	"	"	"	"
"	"	3.12	Tarbo1	10:40	30	6.24	3.08	1.92	82	82	82	10:40	1.92	1.92	"	"	"
"	"	3.12	Tarbo1	10:40	30	6.24	3.08	1.92	82	82	82	10:40	1.92	1.92	"	"	"
July 4	Plot 4	3.25	Tarbo2	10:10	75	1.29	.96	.56	88	64	64	10:40	2:55A	.261	1.03	.501	Corn 51 inches high.
"	"	1.97	"	"	75	1.33	.96	.56	88	64	64	10:40	2:55A	.886	.97	2.004	Corn 50 inches high.
"	"	1.97	"	"	75	1.20	.96	.56	88	64	64	10:40	2:55A	.002	1.15	.025	Corn 42 inches high.
"	"	3.25	Tarbo1	12:10	75	1.21	.96	.56	88	64	64	10:40	2:55A	.099	1.11	.142	Corn 60 inches high.
"	"	3.25	Plum 2	12:10	75	1.16	.96	.56	88	64	64	10:40	2:55A	.008	1.15	.004	Corn 50 inches high.
"	"	3.12	Tarbo1	12:10	75	1.16	.96	.56	88	64	64	10:40	2:55A	.008	1.15	.004	Corn 50 inches high.
"	"	3.12	Tarbo1	12:10	75	1.16	.96	.56	88	64	64	10:40	2:55A	.008	1.15	.004	Corn 50 inches high.
July 5	Plot 5	3.25	Tarbo2	3:30	95	.36	.96	.54	92	66	66	4:24A	5:12A	.021	.33	.056	Corn 51 inches high.
"	"	1.97	"	"	95	.38	.96	.54	92	66	66	4:24A	5:12A	.157	.224	.024	Corn 50 inches high.
"	"	1.97	"	"	95	.39	.96	.54	92	66	66	4:24A	5:12A	.013	.010	.010	Corn 42 inches high.
"	"	3.25	Tarbo1	3:30	95	.39	1.86	.42	92	66	66	4:24A	5:12A	.019	.37	.026	Corn 60 inches high.
"	"	3.25	Plum 2	3:30	95	.34	1.08	.42	92	66	66	4:24A	5:12A	.019	.37	.026	Corn 60 inches high.
"	"	3.12	Tarbo1	3:30	95	.34	1.08	.42	92	66	66	4:24A	5:12A	.019	.37	.026	Corn 60 inches high.
"	"	3.12	Tarbo1	3:30	95	.34	1.08	.42	92	66	66	4:24A	5:12A	.019	.37	.026	Corn 60 inches high.
July 17	Plot 7	3.25	Tarbo2	12:50	92	.42	1.92	.56	88	69	69	4:24A	5:12A	.021	.33	.056	Corn 51 inches high.
"	"	1.97	"	"	92	.42	1.92	.56	88	69	69	4:24A	5:12A	.157	.224	.024	Corn 50 inches high.
"	"	1.97	"	"	92	.42	1.92	.56	88	69	69	4:24A	5:12A	.013	.010	.010	Corn 42 inches high.
"	"	3.25	Tarbo1	12:50	110	.44	1.68	.56	88	69	69	4:24A	5:12A	.019	.37	.026	Corn 60 inches high.
"	"	3.25	Plum 2	12:50	102	.41	1.68	.56	88	69	69	4:24A	5:12A	.019	.37	.026	Corn 60 inches high.
"	"	3.25	Tarbo1	12:50	110	.44	1.68	.56	88	69	69	4:24A	5:12A	.019	.37	.026	Corn 60 inches high.
"	"	3.12	Plum 2	12:50	102	.41	1.68	.56	88	69	69	4:24A	5:12A	.019	.37	.026	Corn 60 inches high.
"	"	3.12	Tarbo1	12:50	110	.44	1.68	.56	88	69	69	4:24A	5:12A	.019	.37	.026	Corn 60 inches high.

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
DIVISION OF RESEARCH

MONTH July & August, 1939
SHEET 6 OF 8 SHEETS

RECORD OF SINGLE STORMS AND THEIR RUN-OFFS ON VARIOUS WATERSHEDS

PROJECT Clearlake, Iowa

S. S. GARDNER, DISTRICT ENGINEER

Date	Watershed		Rainfall										Tentative Run-off (inches)				Run-off		Rainfall Intensity (inches per hour)	Shut Low (feet per day)	Condition of Watershed
	Number	Area (acres)	Order No.	Begin (hour)	Duration (minutes)	Amount (inches)	Maximum Intensity			Maximum	Minimum	Depth (inches)	Fitted (inches)	Marked by Blot							
							4 minutes (inches per hour)	15 minutes (inches per hour)	30 minutes (inches per hour)					Cu. ft. sec.	Time						
July 25	Plot V	3.25	Ter-Ho2	1:00A	70	.85	1.44	1.32	.96	.86	59	62									
"	"	1.97	"	"	70	.85	1.44	1.32	.96	.86	89	62									
"	"	1.97	"	"	70	.85	1.44	1.32	.96	.86	89	62									
"	"	3.25	Ter-Ho1	1:08A	67	.83	1.50	1.40	.98	.98	80	62									
"	"	3.25	Plot 2	1:08A	65	.83	1.32	1.32	1.30	.90	80	62									
"	"	3.25	Ter-Ho2	"	70	.85	1.44	1.32	.96	.86	89	62									
"	"	3.12	Ter-Ho1	1:08A	67	.88	1.80	1.40	.98	.98	89	62									
"	"	3.12	Plot 2	1:08A	65	.83	1.32	1.32	1.30	.90	89	62									
"	"	3.12	Ter-Ho1	1:08A	67	.88	1.80	1.40	.98	.98	89	62									
July 28	Plot V	3.25	Ter-Ho2	1:35A	30	.61	2.76	2.20	1.18	1.18	87	66	1:40A	2:50A	.023	.93	1:54A				
"	"	1.97	"	"	30	.59	2.76	2.20	1.18	1.18	87	66	1:40A	3:12A	.09	.45	1:56A				
"	"	1.97	"	"	30	.59	2.76	2.20	1.18	1.18	87	66									
"	"	3.25	Ter-Ho1	1:35A	20	.57	2.64	2.20	1.14	1.14	87	66									
"	"	3.25	Plot 2	1:35A	20	.59	2.76	2.20	1.18	1.18	87	66									
"	"	3.25	Ter-Ho2	1:35A	20	.57	2.64	2.20	1.14	1.14	87	66									
"	"	3.12	Plot 2	1:35A	25	.60	2.64	2.16	1.20	1.20	87	66									
"	"	3.12	Ter-Ho1	1:35A	20	.57	2.63	2.20	1.14	1.14	87	66									
Aug. 1	Plot V	3.25	Ter-Ho2	11:50A	160	.22	.96	.40	.24	.24	80	71									
"	"	1.97	"	"	160	.22	.96	.40	.24	.24	80	71									
"	"	1.97	"	"	160	.22	.96	.40	.24	.24	80	71									
"	"	3.25	Ter-Ho1	11:55A	155	.20	1.56	.52	.26	.26	80	71									
"	"	3.25	Plot 2	11:55A	160	.20	1.44	.48	.24	.24	80	71									
"	"	3.25	Ter-Ho2	11:55A	160	.20	.96	.40	.24	.24	80	71									
"	"	3.12	Ter-Ho1	11:55A	155	.20	1.56	.52	.26	.26	80	71									
"	"	3.12	Plot 2	11:55A	160	.20	1.44	.48	.24	.24	80	71									
"	"	3.12	Ter-Ho2	11:55A	160	.20	1.44	.48	.24	.24	80	71									
Aug. 7	Plot V	3.25	Ter-Ho2	3:45P	107	.26	.48	.32	.22	.22	84	65									
"	"	1.97	"	"	107	.26	.48	.32	.22	.22	84	65									
"	"	1.97	"	"	107	.26	.48	.32	.22	.22	84	65									
"	"	3.25	Ter-Ho1	3:45P	106	.26	.60	.44	.24	.24	84	65									
"	"	3.25	Plot 2	3:45P	108	.29	.60	.48	.28	.28	84	65									
"	"	3.25	Ter-Ho2	3:45P	107	.26	.48	.32	.22	.22	84	65									
"	"	3.12	Ter-Ho1	3:45P	105	.26	.60	.44	.24	.24	84	65									
"	"	3.12	Plot 2	3:45P	108	.29	.60	.46	.28	.28	84	65									
"	"	3.12	Ter-Ho1	3:45P	105	.26	.60	.44	.24	.24	84	65									

PROJECT Clarinda, Iowa

RECORD OF SINGLE STORMS AND THEIR RUN-OFFS ON VARIOUS WATERSHEDS

[illegible]

UNITED STATES DEPARTMENT OF AGRICULTURE
 SOIL CONSERVATION SERVICE
 DIVISION OF RESEARCH

 MONTH November, 1939
 SHEET 6 OF 8 SHEETS

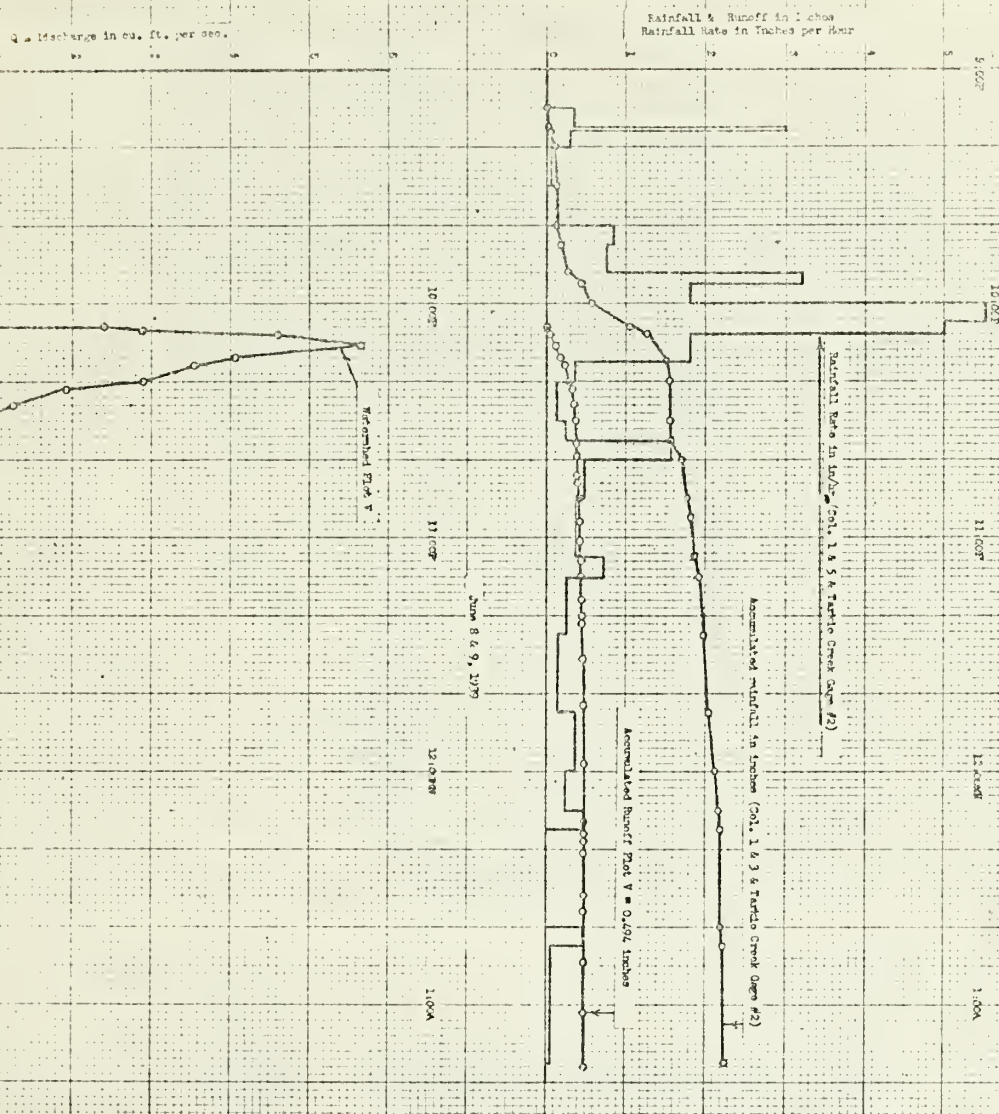
RECORD OF SINGLE STORMS AND THEIR RUN-OFFS ON VARIOUS WATERSHEDS

 Project Clarinda, Iowa

U. S. SOIL CONSERVATION SERVICE, 1939

DATE	WATERSHED	Number	Area (acres)	Gage No.	Run (hour)	Direction (compass)	RAINFALL			TEMPERATURE (Degrees F)			RUN-OFF			RAINFALL Meters (inches)	Run Low (feet per sec)	Comments or Watershed
							Amount (inches)	Direction (compass)	Time (hour)	Maximum	Minimum	Run (hour)	Amount (inches)	Time (hour)				
Nov. 30		102	Y	3.25	Parke 2	3:00P	255	.37	.24	.20	.16	44	31	None	0.37	None		
"		"	H	1.27	"	"	255	.37	.24	.20	.16	44	31	None	.37	None		
"		"	X	1.27	"	"	255	.37	.24	.20	.16	44	31	None	.37	None		
"		"	Y	3.25	Parke 2	3:00P	245	.35	.24	.20	.16	44	31	None	.37	None		
"		"	"	"	Parke 2	3:45P	310	.37	.24	.20	.16	44	31	None				
"		"	"	"	Parke 2	3:00P	255	.37	.24	.20	.16	44	31	None				
"		"	"	"	Parke 2	3:00P	245	.35	.24	.20	.16	44	31	None				
"		"	"	"	Parke 2	3:45P	310	.37	.24	.20	.16	44	31	None				
"		"	"	"	Parke 2	3:00P	245	.35	.24	.20	.16	44	31	None				

Waterford Plot V



(1)	(2)	(3)	(4)	(5a)(b)	(6)
(λ)	(μ)	(λ)	(μ)	(λ)	(μ)
0.1674	1	0.2	0.1	0.6	0.5
0.16	1	0.2	0.1	0.7	0.6
0.15	1	0.2	0.1	0.8	0.7
0.14	1	0.2	0.1	0.9	0.8
0.13	1	0.2	0.1	1.0	0.9
0.12	1	0.2	0.1	1.1	1.0
0.11	1	0.2	0.1	1.2	1.1
0.10	1	0.2	0.1	1.3	1.2
0.09	1	0.2	0.1	1.4	1.3
0.08	1	0.2	0.1	1.5	1.4
0.07	1	0.2	0.1	1.6	1.5
0.06	1	0.2	0.1	1.7	1.6
0.05	1	0.2	0.1	1.8	1.7
0.04	1	0.2	0.1	1.9	1.8
0.03	1	0.2	0.1	2.0	1.9
0.02	1	0.2	0.1	2.1	2.0
0.01	1	0.2	0.1	2.2	2.1
0.00	1	0.2	0.1	2.3	2.2
0.00	1	0.2	0.1	2.4	2.3
0.00	1	0.2	0.1	2.5	2.4
0.00	1	0.2	0.1	2.6	2.5
0.00	1	0.2	0.1	2.7	2.6
0.00	1	0.2	0.1	2.8	2.7
0.00	1	0.2	0.1	2.9	2.8
0.00	1	0.2	0.1	3.0	2.9
0.00	1	0.2	0.1	3.1	3.0
0.00	1	0.2	0.1	3.2	3.1
0.00	1	0.2	0.1	3.3	3.2
0.00	1	0.2	0.1	3.4	3.3
0.00	1	0.2	0.1	3.5	3.4
0.00	1	0.2	0.1	3.6	3.5
0.00	1	0.2	0.1	3.7	3.6
0.00	1	0.2	0.1	3.8	3.7
0.00	1	0.2	0.1	3.9	3.8
0.00	1	0.2	0.1	4.0	3.9
0.00	1	0.2	0.1	4.1	4.0
0.00	1	0.2	0.1	4.2	4.1
0.00	1	0.2	0.1	4.3	4.2
0.00	1	0.2	0.1	4.4	4.3
0.00	1	0.2	0.1	4.5	4.4
0.00	1	0.2	0.1	4.6	4.5
0.00	1	0.2	0.1	4.7	4.6
0.00	1	0.2	0.1	4.8	4.7
0.00	1	0.2	0.1	4.9	4.8
0.00	1	0.2	0.1	5.0	4.9
0.00	1	0.2	0.1	5.1	5.0
0.00	1	0.2	0.1	5.2	5.1
0.00	1	0.2	0.1	5.3	5.2
0.00	1	0.2	0.1	5.4	5.3
0.00	1	0.2	0.1	5.5	5.4
0.00	1	0.2	0.1	5.6	5.5
0.00	1	0.2	0.1	5.7	5.6
0.00	1	0.2	0.1	5.8	5.7
0.00	1	0.2	0.1	5.9	5.8
0.00	1	0.2	0.1	6.0	5.9
0.00	1	0.2	0.1	6.1	6.0
0.00	1	0.2	0.1	6.2	6.1
0.00	1	0.2	0.1	6.3	6.2
0.00	1	0.2	0.1	6.4	6.3
0.00	1	0.2	0.1	6.5	6.4
0.00	1	0.2	0.1	6.6	6.5
0.00	1	0.2	0.1	6.7	6.6
0.00	1	0.2	0.1	6.8	6.7
0.00	1	0.2	0.1	6.9	6.8
0.00	1	0.2	0.1	7.0	6.9
0.00	1	0.2	0.1	7.1	7.0
0.00	1	0.2	0.1	7.2	7.1
0.00	1	0.2	0.1	7.3	7.2
0.00	1	0.2	0.1	7.4	7.3
0.00	1	0.2	0.1	7.5	7.4
0.00	1	0.2	0.1	7.6	7.5
0.00	1	0.2	0.1	7.7	7.6
0.00	1	0.2	0.1	7.8	7.7
0.00	1	0.2	0.1	7.9	7.8
0.00	1	0.2	0.1	8.0	7.9
0.00	1	0.2	0.1	8.1	8.0
0.00	1	0.2	0.1	8.2	8.1
0.00	1	0.2	0.1	8.3	8.2
0.00	1	0.2	0.1	8.4	8.3
0.00	1	0.2	0.1	8.5	8.4
0.00	1	0.2	0.1	8.6	8.5
0.00	1	0.2	0.1	8.7	8.6
0.00	1	0.2	0.1	8.8	8.7
0.00	1	0.2	0.1	8.9	8.8
0.00	1	0.2	0.1	9.0	8.9
0.00	1	0.2	0.1	9.1	9.0
0.00	1	0.2	0.1	9.2	9.1
0.00	1	0.2	0.1	9.3	9.2
0.00	1	0.2	0.1	9.4	9.3
0.00	1	0.2	0.1	9.5	9.4
0.00	1	0.2	0.1	9.6	9.5
0.00	1	0.2	0.1	9.7	9.6
0.00	1	0.2	0.1	9.8	9.7
0.00	1	0.2	0.1	9.9	9.8
0.00	1	0.2	0.1	10.0	9.9

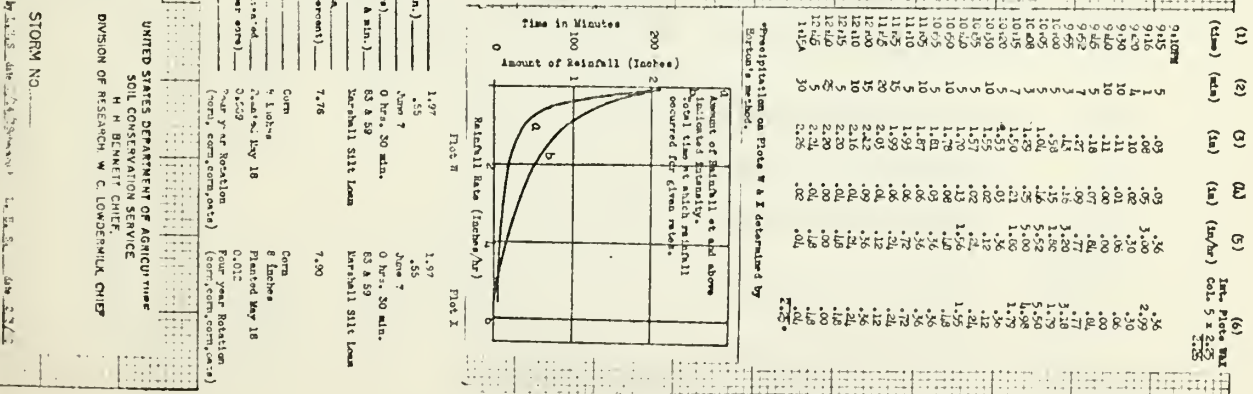
*Precipitation on Plot V watershed determined by Horton's Method.

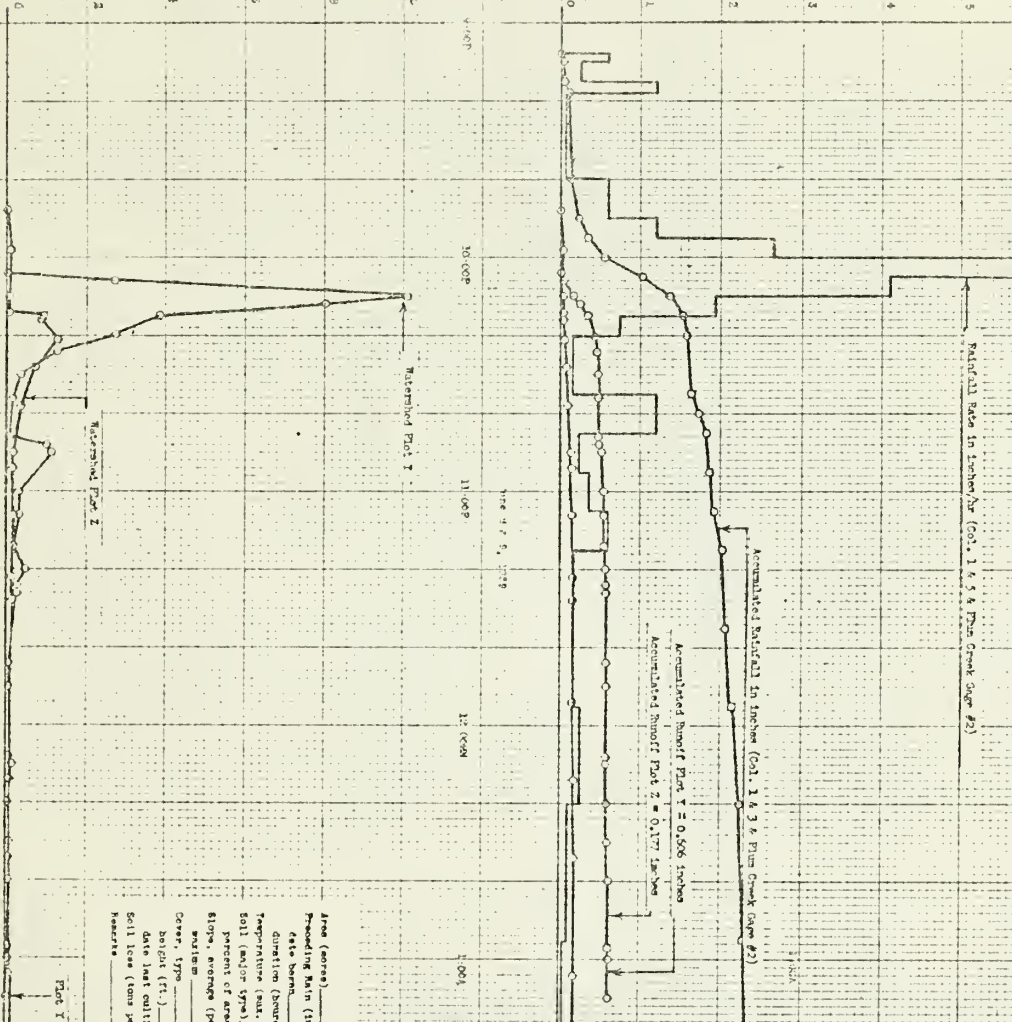
Plot V

[illegible]

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
H. H. BENNETT, CHIEF
DIVISION OF RESEARCH, 100. LONGLEAF, CHIEF

12-3-21
 Plot by L.H.S. & checked by L.H.S. date 2/1/40
 Computations by L.H.S. date Feb 1939 checked by JND date 11-2-40





precipitation on Watersed Flots 1 & 2 determined by Libron's method.

3.75	8 inches	Com
0.40	June 7	
0	June 44 P.M.	
85 & 59	1st small white room	
8.22		
3.32	8 inches	Com
0.40	June 7	
0	June 44 P.M.	
85 & 59	1st small white room	
9.36		

June 8 & 9, 1937
Martha's Vineyard
Page 2 of 2 Sheets

Not by L. S. C. 10/10/10 L. S. C. 10/10/10

Computations by L. S. Wells Fall, '89, and by A. L. Wells Dec: '00, '89

Watershed Plot V

June 10, 1919

4.004

5.004

8.004

Slope of time as shown

2.004

10.004

Rainfall and Runoff in inches
Rainfall Rate in inches per hour

Rainfall Data in in./hr. (Col. 1 & 5 & Ratio Great Crop P2)

Accumulated rainfall in inches

Accumulated runoff Plot V = 0.142 inches

Maximum Precipitation (inches)

Minimum Precip. (1st inches)
for a 6-hour period of time

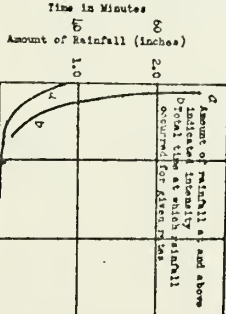
Duration (hours)

Watershed Plot V

June 10, 1919
Charted, 100
Sheet 1 of 3 Sheets

(1)	(2)	(3)	(4)	(5)	(6)
Time	Rate	In	In	In/hr	Col. 5 x .57
1.004	20	.12	.12	.36	.36
3.123	5	.11	.11	1.73	1.73
3.140	10	.34	.11	.66	.66
4.100	20	.40	.20	.40	.40
4.113	5	.52	.08	.24	.24
8.113	3	.53	.03	.36	.36
8.115	2	.65	.10	3.00	3.00
8.125	10	.77	.12	.77	.77
8.130	5	.81	.04	.48	.48
8.135	5	.84	.03	.56	.56
8.145	10	.87	.03	.33	.33
				.37	.37

*Precipitation on Watershed Plot V determined by Horton's method.



Area (acres) _____ Plot V
Preceding Rain (in.) _____ 2.126
Gate Water _____ 147.8
Duration (hours) _____ 4 hrs 6 min.
Temperature (air, 8 min.) _____ 74 & 51
Soil (major type) _____ (minor) silt loam
Percent of area _____ 7.69
Slope, average (percent) _____
Slopes _____
Cover, type _____ Corn
Height (ft.) _____ 8 inches
Date last cut on soil _____ May 16 planted corn
Soil loss (tons per acre) _____ 0.026
Remarks _____ For year rotation
_____ (corn, alfalfa, soybean & clover) in rotation

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
DIVISION OF RESEARCH W. C. LOWMEYER, CHIEF

STORM PLOT

Plot No. _____
Rainfall _____
Runoff _____
Duration _____
Temperature _____
Soil _____
Slope _____
Cover _____
Height _____
Date _____
Soil loss _____
Remarks _____

Watershed Plot Y & Z

June 10, 1939

Rainfall and Runoff in inches
Rainfall Rate in inches per hour

2.004

4.004

5.004

5.704

6.704

7.004

Slope of line
as shown

(1)	(2)	(3)	(4)	(5)	(6)	(7)
(Time)	(Area)	(In)	(In)	(In/In)	Rate on Plot Y Col. 5 x $\frac{100}{100}$	Rate on Plot Z Col. 5 x $\frac{100}{100}$
3:00AM	15	.08	.08	.22	.21	.22
3:15	5	.10	.02	.24	.24	.24
3:30	5	.12	.12	.28	.28	.28
3:45	10	.12	.12	.28	.28	.28
3:50	10	.46	.11	.66	.66	.66
3:55	5	.49	.04	.17	.17	.17
4:00	10	.53	.04	.23	.23	.23
4:15	15	.57	.04	.16	.16	.16
4:30	2	.66	.09	2.70	2.68	2.68
4:45	5	.77	.11	1.32	1.31	1.31
4:55	5	.81	.04	.17	.17	.17
5:00	5	.81	.00	.00	.00	.00
5:15	15	.87	.06	.24	.24	.24
5:45				.20	.20	.20

Evapotranspiration on Watershed Plot Y & Z determined by Bowen's method.

Rainfall rate in inches/hr (Col. 1 & 5 & Plum Creek Gage #2)

Accumulated rainfall in inches (Col. 1 & 5 & Plum Creek Gage #2)

Accumulated runoff Plot Y = 0.244 inches

Accumulated runoff Plot Z = 0.03 inches

Slope of line
as shown

Watershed Plot Y

Plot Y

Plot Z

Area (acres)

Perennial Rain (in.)

Date born

Direction (bearing)

Temperature (air, & soil)

Soil (major type)

Percent of area

Flow, average (percent)

Soil type

Cover, type

Height (ft.)

Date last cultivated

Soil type (tons per acre)

Moisture

Location (corn, corn, oats, clover)

Location (corn, corn, oats, clover)

Location (corn, corn, oats, clover)

Location (corn, corn, oats, clover)

Location (corn, corn, oats, clover)

Location (corn, corn, oats, clover)

Location (corn, corn, oats, clover)

Location (corn, corn, oats, clover)

Location (corn, corn, oats, clover)

Location (corn, corn, oats, clover)

Location (corn, corn, oats, clover)

Q = Discharge in cu. ft. per sec.

Watershed Plot 1

Watershed Plot 2

Watershed Plot 2

STORM NO.

Run by 11:25 a.m. 10/40 at 11:55 a.m. 10/40

159

UNITED STATES DEPARTMENT OF AGRICULTURE

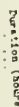
SOIL CONSERVATION SERVICE

H. M. BENNETT, CHIEF

DIVISION OF RESEARCH W. C. LOWDERMILK, CHIEF

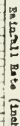
Sheet 3 of 5 sheets
June 10, 1939
Clarinda, Iowa

June 13, 1939



1004, 1 10; 3004

40000 100 2039
C. 100000, 10000
400000 Plot 1



Plot 1

Area (acres)	3.75
Prevalent Rain (in.)	0.50
date sown	June 10
duration (hours)	0 17.5 5.0
Temperature (max. & min.)	71 & 66
Soil (major type)	Wheatland silt loam
percent of area	
Slopes, average (percent)	9.82
a-cision	
Cover type	Corn
height (ft.)	14 inches
date last cut (year)	May 7, outworn
Soil loss (tons per acre)	0.02
Location (top, bottom)	

	(1)	(2)	(3)	(4)	(5)	(6)
	(time)	(min)	(hr)	(hr)	(hr/hr)	Int. on Plot Cal. $\times \frac{1}{0.5}$
4.455	5	.02	.02	.02	.21	.21
4.55	10	.03	.03	.03	.44	.44
4.65	20	.04	.04	.04	1.07	1.07
4.75	30	.06	.06	.06	1.21	1.21
4.85	40	.07	.07	.07	1.31	1.31
4.95	50	.08	.08	.08	1.41	1.41
5.05	15	.06	.06	.06	.37	.37
	35	.08	.08	.08	.68	.68
	55	.08	.08	.08	.08	.08

— .05%
Precipitation Plot \times determined by Jordan's method.

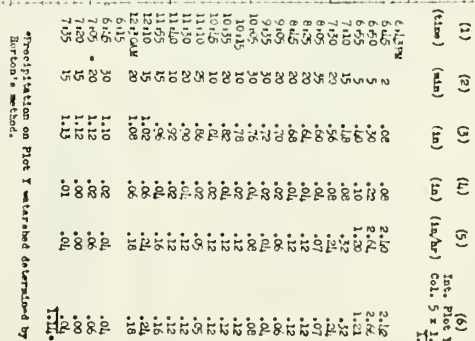
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SOIL CONSERVATION SERVICE
H. H. BLUNNET, CHIEF,
DIVISION OF RESEARCH, W. C. LOWDERMILK, CHIEF

H H BLANSETT, CHIEF

STORM NO

Put by J. S. date _____ rated by _____
 Computations by _____ date _____

June 18 & 19, 1939



Burton's method

Page 2 of 2

UNITED STATES DEPARTMENT OF AGRICULTURE

SOIL CONSTRUCTION SERVICE

H. H. BLINNETT, CHIEF

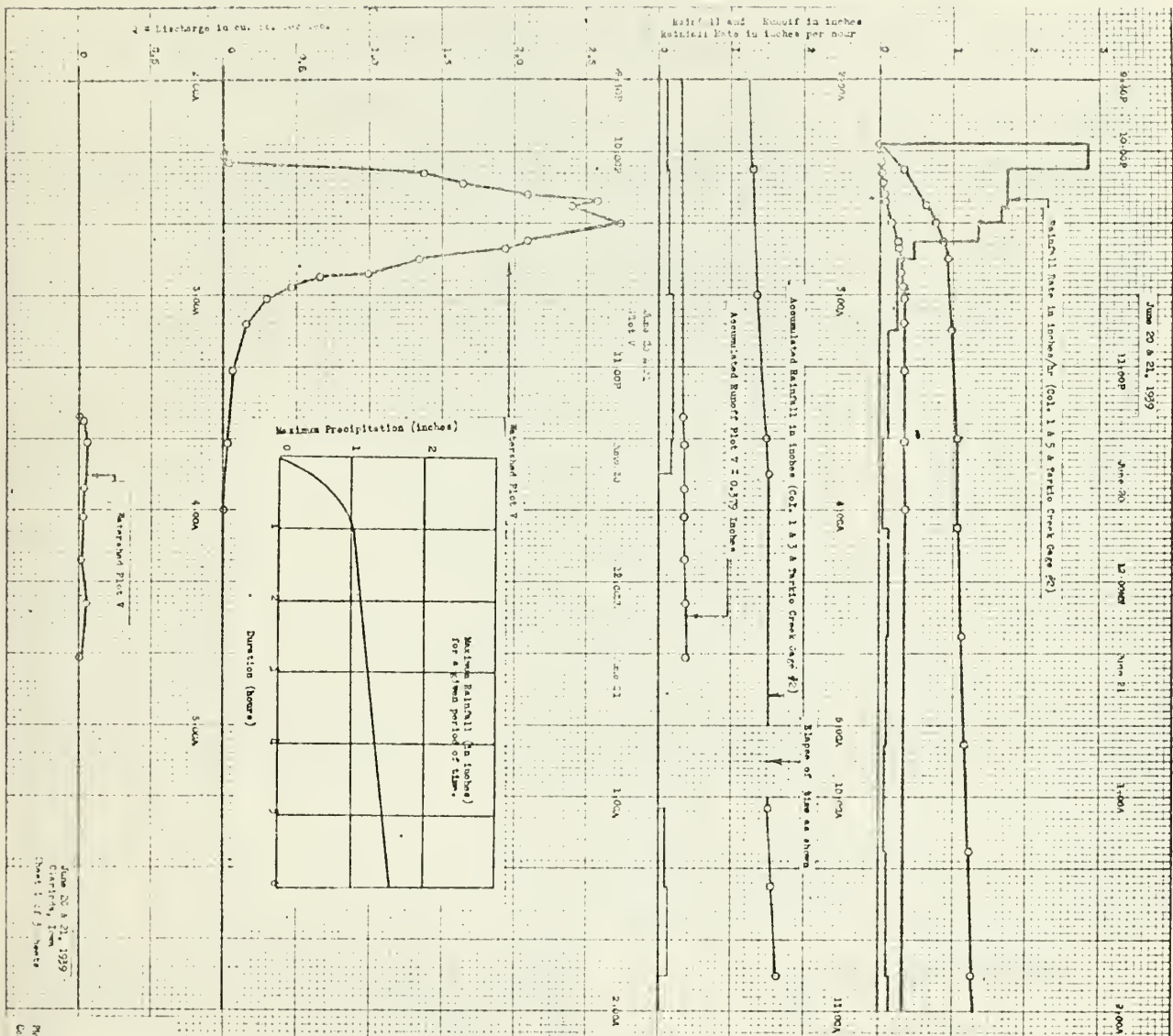
DIVISION OF RESEARCH W. C. LOWCEMILLER CHIEF

STO:IM NJ

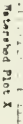
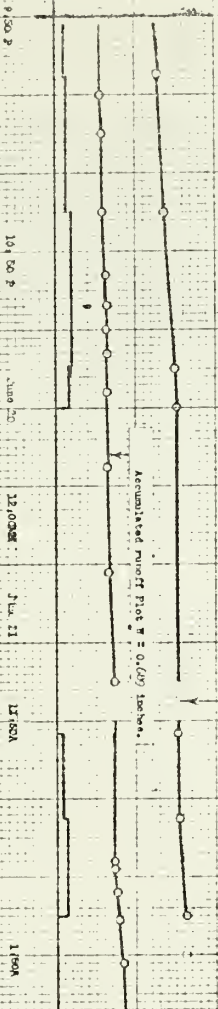
Plan by _____

Computations by W. J. S. 11-1-53 Date 11-1-53 Checked by W. J. S. 11-1-53 Date 11-1-53

Plot V



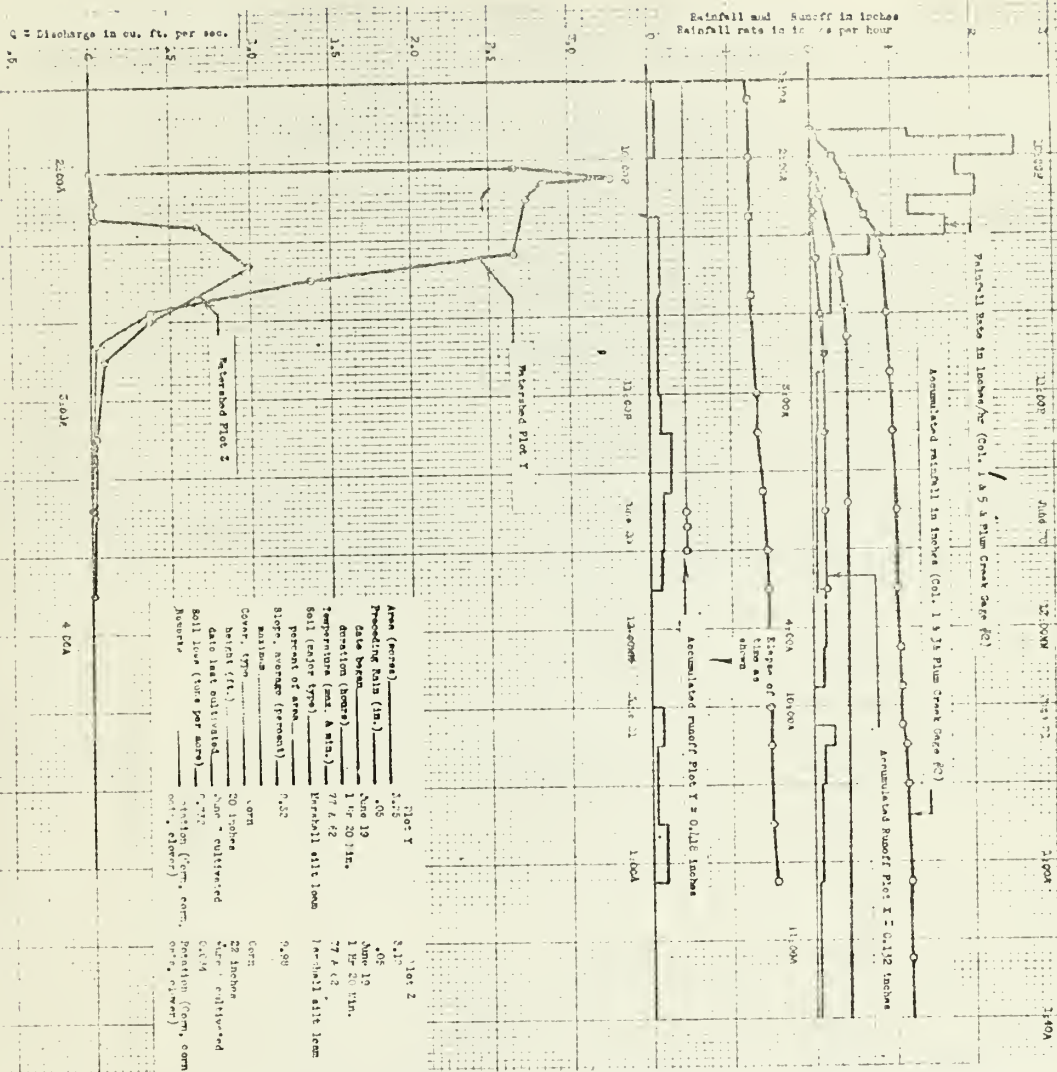
(1)	(2)	(3)	(4)	(5)	(6)
Time	Rate	In	In	Inches	Int. on Plot V
9:55 AM	7	.33	.33	2.03	2.67
10:05	10	.62	.62	1.74	1.64
10:15	3	.18	.18	1.55	1.59
10:25	5	.31	.31	1.46	1.46
10:35	20	.97	.97	.88	.88
10:45	10	.49	.49	.80	.80
10:55	10	.49	.49	.72	.72
11:05	10	.49	.49	.64	.64
11:15	10	.49	.49	.56	.56
11:25	10	.49	.49	.48	.48
11:35	10	.49	.49	.40	.40
11:45	10	.49	.49	.32	.32
11:55	10	.49	.49	.24	.24
12:05	10	.49	.49	.16	.16
12:15	10	.49	.49	.08	.08
12:25	10	.49	.49	.00	.00
12:35	10	.49	.49	.00	.00
12:45	10	.49	.49	.00	.00
12:55	10	.49	.49	.00	.00
1:05	10	.49	.49	.00	.00
1:15	10	.49	.49	.00	.00
1:25	10	.49	.49	.00	.00
1:35	10	.49	.49	.00	.00
1:45	10	.49	.49	.00	.00
1:55	10	.49	.49	.00	.00
2:05	10	.49	.49	.00	.00
2:15	10	.49	.49	.00	.00
2:25	10	.49	.49	.00	.00
2:35	10	.49	.49	.00	.00
2:45	10	.49	.49	.00	.00
2:55	10	.49	.49	.00	.00
3:05	10	.49	.49	.00	.00
3:15	10	.49	.49	.00	.00
3:25	10	.49	.49	.00	.00
3:35	10	.49	.49	.00	.00
3:45	10	.49	.49	.00	.00
3:55	10	.49	.49	.00	.00
4:05	10	.49	.49	.00	.00
4:15	10	.49	.49	.00	.00
4:25	10	.49	.49	.00	.00
4:35	10	.49	.49	.00	.00
4:45	10	.49	.49	.00	.00
4:55	10	.49	.49	.00	.00
5:05	10	.49	.49	.00	.00
5:15	10	.49	.49	.00	.00
5:25	10	.49	.49	.00	.00
5:35	10	.49	.49	.00	.00
5:45	10	.49	.49	.00	.00
5:55	10	.49	.49	.00	.00
6:05	10	.49	.49	.00	.00
6:15	10	.49	.49	.00	.00
6:25	10	.49	.49	.00	.00
6:35	10	.49	.49	.00	.00
6:45	10	.49	.49	.00	.00
6:55	10	.49	.49	.00	.00
7:05	10	.49	.49	.00	.00
7:15	10	.49	.49	.00	.00
7:25	10	.49	.49	.00	.00
7:35	10	.49	.49	.00	.00
7:45	10	.49	.49	.00	.00
7:55	10	.49	.49	.00	.00
8:05	10	.49	.49	.00	.00
8:15	10	.49	.49	.00	.00
8:25	10	.49	.49	.00	.00
8:35	10	.49	.49	.00	.00
8:45	10	.49	.49	.00	.00
8:55	10	.49	.49	.00	.00
9:05	10	.49	.49	.00	.00
9:15	10	.49	.49	.00	.00
9:25	10	.49	.49	.00	.00
9:35	10	.49	.49	.00	.00
9:45	10	.49	.49	.00	.00
9:55	10	.49	.49	.00	.00
10:05	10	.49	.49	.00	.00
10:15	10	.49	.49	.00	.00
10:25	10	.49	.49	.00	.00
10:35	10	.49	.49	.00	.00
10:45	10	.49	.49	.00	.00
10:55	10	.49	.49	.00	.00
11:05	10	.49	.49	.00	.00
11:15	10	.49	.49	.00	.00
11:25	10	.49	.49	.00	.00
11:35	10	.49	.49	.00	.00
11:45	10	.49	.49	.00	.00
11:55	10	.49	.49	.00	.00
12:05	10	.49	.49	.00	.00
12:15	10	.49	.49	.00	.00
12:25	10	.49	.49	.00	.00
12:35	10	.49	.49	.00	.00
12:45	10	.49	.49	.00	.00
12:55	10	.49	.49	.00	.00
1:05	10	.49	.49	.00	.00
1:15	10	.49	.49	.00	.00
1:25	10	.49	.49	.00	.00
1:35	10	.49	.49	.00	.00
1:45	10	.49	.49	.00	.00
1:55	10	.49	.49	.00	.00
2:05	10	.49	.49	.00	.00
2:15	10	.49	.49	.00	.00
2:25	10	.49	.49	.00	.00
2:35	10	.49	.49	.00	.00
2:45	10	.49	.49	.00	.00
2:55	10	.49	.49	.00	.00
3:05	10	.49	.49	.00	.00
3:15	10	.49	.49	.00	.00
3:25	10	.49	.49	.00	.00
3:35	10	.49	.49	.00	.00
3:45	10	.49	.49	.00	.00
3:55	10	.49	.49	.00	.00
4:05	10	.49	.49	.00	.00
4:15	10	.49	.49	.00	.00
4:25	10	.49	.49	.00	.00
4:35	10	.49	.49	.00	.00
4:45	10	.49	.49	.00	.00
4:55	10	.49	.49	.00	.00
5:05	10	.49	.49	.00	.00
5:15	10	.49	.49	.00	.00
5:25	10	.49	.49	.00	.00
5:35	10	.49	.49	.00	.00
5:45	10	.49	.49	.00	.00
5:55	10	.49	.49	.00	.00
6:05	10	.49	.49	.00	.00
6:15	10	.49	.49	.00	.00
6:25	10	.49	.49	.00	.00
6:35	10	.49	.49	.00	.00
6:45	10	.49	.49	.00	.00
6:55	10	.49	.49	.00	.00
7:05	10	.49	.49	.00	.00
7:15	10	.49	.49	.00	.00
7:25	10	.49	.49	.00	.00
7:35	10	.49	.49	.00	.00
7:45	10	.49	.49	.00	.00
7:55	10	.49	.49	.00	.00
8:05	10	.49	.49	.00	.00
8:15	10	.49	.49	.00	.00
8:25	10	.49	.49	.00	.00
8:35	10	.49	.49	.00	.00
8:45	10	.49	.49	.00	.00
8:55	10	.49	.49	.00	.00
9:05	10	.49	.49	.00	.00
9:15	10	.49	.49	.00	.00
9:25	10	.49	.49	.00	.00
9:35	10	.49	.49	.00	.00
9:45	10	.49	.49	.00	.00
9:55	10	.49	.49	.00	.00
10:05	10	.49	.49	.00	.00
10:15	10	.49	.49	.00	.00
10:25	10	.49	.49	.00	.00
10:35	10	.49	.49	.00	.00
10:45	10	.49	.49	.00	.00
10:55	10	.49	.49	.00	.00
11:05	10	.49	.49	.00	.00
11:15	10	.49	.49	.00	.00
11:25	10	.49	.49	.00	.00
11:35	10	.49	.49	.00	.00
11:45	10	.49	.49	.00	.00
11:55	10	.49	.49	.00	.00
12:05	10	.49	.49	.00	.00
12:15	10	.49	.49	.00	.00
12:25	10	.49	.49	.00	.00
12:35	10	.49	.49	.00	.00
12:45	10	.49	.49	.00	.00
12:55	10	.49	.49	.00	.00
1:05	10	.49	.49	.00	.00
1:15	10	.49	.49	.00	.00
1:25	10	.49	.49	.00	.00
1:35	10	.49	.49	.00	.00
1:45	10	.49	.49	.00	.00
1:55	10	.49	.49	.00	.00
2:05	10	.49	.49	.00	.00
2:15	10	.49	.49	.00	.00
2:25	10	.49	.49	.00	.00
2:35	10	.49	.49	.00	.00
2:45	10	.49	.49	.00	.00
2:55	10	.49	.49	.00	.00
3:05	10	.49	.49	.00	.00
3:15	10	.49	.49	.00	.00
3:25	10	.49	.49	.00	.00
3:35	10	.49	.49	.00	.00
3:45	10	.49	.49	.00	.00
3:55	10	.49	.49	.00	.00
4:05	10	.49	.49	.00	.00
4:15	10	.49	.49	.00	.00
4:25	10	.49	.49	.00	.00
4:35	10	.49	.49	.00	.00
4:45	10	.49	.49	.00	.00
4:55	10	.49	.49	.00	.00
5:05	10	.49	.49	.00	.00
5:15	10	.49	.49	.00	.00
5:25	10	.49	.49	.00	.00
5:35	10	.49	.49	.00	.00
5:45	10	.49	.49	.00	.00
5:55	10	.49	.49	.00	.00
6:05	10	.49	.49	.00	.00
6:15	10	.49	.49	.00	.00
6:25	10	.49	.49	.00	.00
6:35	10	.49	.49	.00	.00
6:45	10	.49	.49	.00	.00
6:55	10	.49	.49	.00	.00
7:05	10	.49	.49	.00	.00
7:15	10	.49	.49	.00	.00
7:25	10	.49	.49	.00	.00
7:35	10	.49	.49	.00	.00
7:45	10	.49	.49	.00	.00
7:55	10	.49	.49	.00	.00
8:05	10	.49	.49	.00	.00
8:15	10	.49	.49	.00	.00
8:25	10	.49	.49	.00	.00
8:35	10	.49	.49	.00	.00
8:45	10	.49	.49	.00	.00
8:55	10	.49	.49	.00	.00
9:05	10	.49	.49	.00	.00
9:15	10	.49	.49	.00	.00
9:25	10	.49	.49	.00	.00
9:35	10	.49	.49	.00	.00
9:45	10	.49	.49	.00	.00
9:55	10	.49	.49	.00	.00
10:05	10	.49	.49	.00	.00
10:15	10	.49	.49	.00	.00
10:25	10	.49	.49	.00	.00
10:35	10	.49	.49	.00	.00
10:45	10	.49	.49	.00	.00
10:55	10	.49	.49	.00	.00
11:05	10	.49	.49	.00	.00
11:15	10	.49	.49	.00	.00
11:25	10	.49	.49	.00	.00
11:35	10	.49	.49	.00	.00
11:45	10	.49	.49	.00	.00
11:55	10	.49	.49	.00	.00
12:05	10	.49	.49	.00	.00
12:15	10	.49	.49	.00	.00
12:25	10	.49	.49	.00	.00
12:35	10	.49	.49	.00	.00
12:45	10	.49	.49	.00	.00
12:55	10	.49	.49	.00	.00
1:05	10	.49	.49	.00	.00
1:15	10	.49	.49	.00	.00
1:25	10	.49	.49	.00	.00
1:35	10	.49	.49	.00	.00
1:45	10	.49	.49	.00	.00
1:55	10	.49	.49	.00	.00
2:05	10	.49	.49	.00	.00
2:15	10	.49	.49	.00	.00
2:25	10	.49	.49	.00	.00



June 20 & 21, 1949
Martha's Vineyard
North of Tisbury

Marshall Plot Y & Z

June 20 & 21, 1939



(1) (2) (3) (4) (5) (6) (7)
(time) (min) (in) (in) (in/hr) (in/hr) (in/hr) (in/hr)
Int. on Plot Y Int. on Plot Z
Int. on Plot Y Int. on Plot Z
Int. on Plot Y Int. on Plot Z
Int. on Plot Y Int. on Plot Z

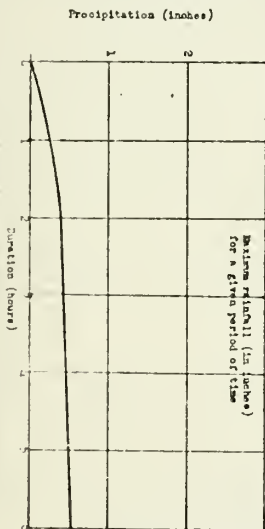
Precipitation on Marshall Plot Y & Z determined by Horton's method.

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
NATIONAL SOIL CONSERVATION SERVICE
DIVISION OF RESEARCH, W.C. CROWE, CHIEF

Plot Y Int. data 1/25/40 checked by L.E.B. data
Computations by L.L. B. data 1/25/40 checked by L.E.B. data 1/25/40

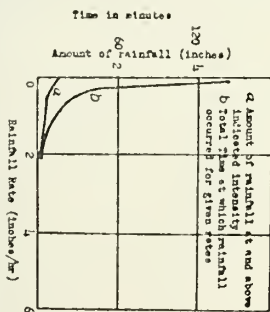
STATION NO.

Rainfall and Runoff in 1960
Rainfall rate in inches per hour



(1)	(2)	(3)	(4)	(5)	In ₂ on Plot Col. 5 x $\frac{10^6}{\text{wt.}}$
8.50PM	10	.06	.06	.36	.16
9.02	13	.22	.24	1.30	1.16
9.15	16	.66	.64	.68	.64
9.45	20	.63	.67	.12	.09
10.00	35	.23	.24	.18	.14
10.10	15	.34	.32	.08	.2
10.35	10	.08	.08	.08	.09
10.46	15	.34	.34	.12	.26
10.50	16	.04	.04	.24	.26
11.00	15	.14	.14	.08	.14
11.06	15	.46	.46	.24	.26
11.40P	5	.06	.02	.02	.08
3.13M	2	.52	.07	2.10	2.14
3.22	2	.55	.09	.90	1.06

Preipitation on Plot V measured determined by Horton's method.



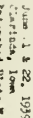
Plot 1

Area (acres)	5.75
Preceding Rain (in.)	.60
Date born	Aug 21
Duration (hours)	0 To 47 min.
Temperature (°C & min.)	74 & 63
Soil (major type)	Heavy silty loam
Percent of area	
Biops, Average (percent)	7.69
Salinity	
Cover, Type	Open
Height (ft.)	2 to 3 inches
Date last cultivated	June 10 cultivated
Soil loss (can per acre)	0.005
Remarks	Planted Corn, oats, alfalfa
Notes: All proof, water in	
all box.	

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
R. H. BENNETT CHIEF,
DIVISION OF RESEARCH W. C. LOWDERMILK, CHIEF

STORY NO

Computations by W. A. R. 11:49 checked by W. A. R. 12:10

Morton's method.

to Action (Comm. comm. certn, date) No Action (Comm. comm. certn, date)

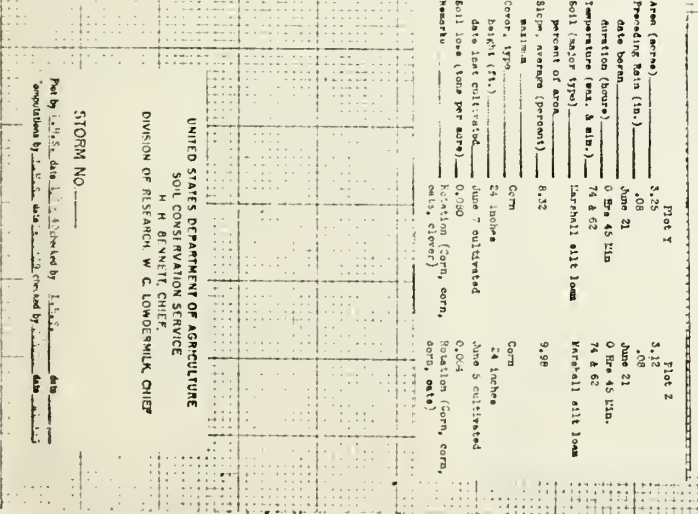
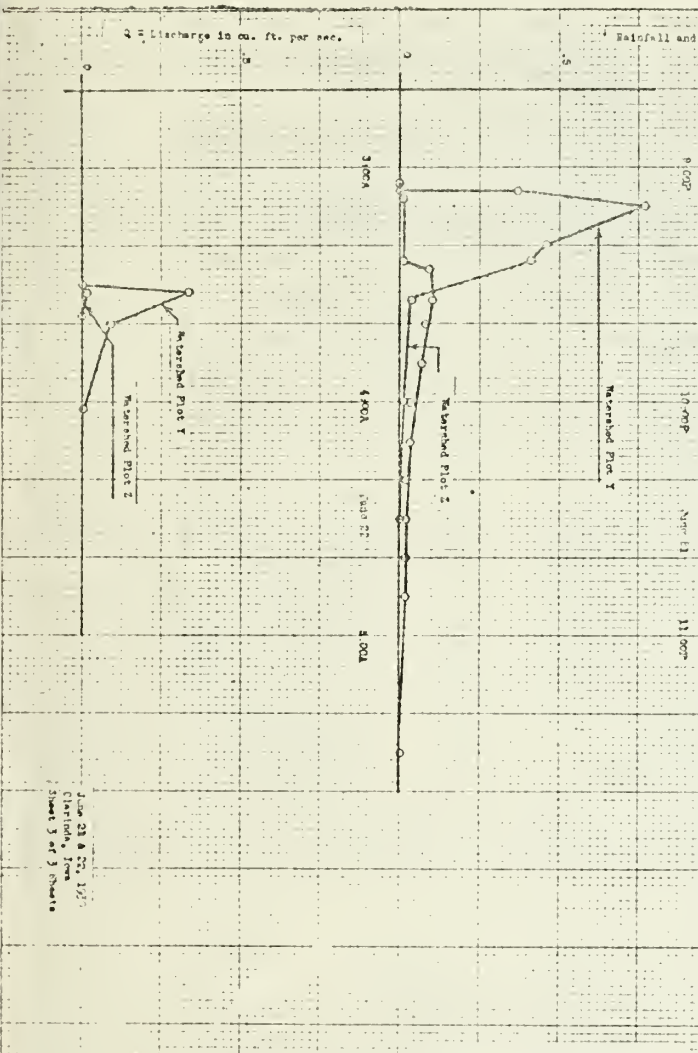
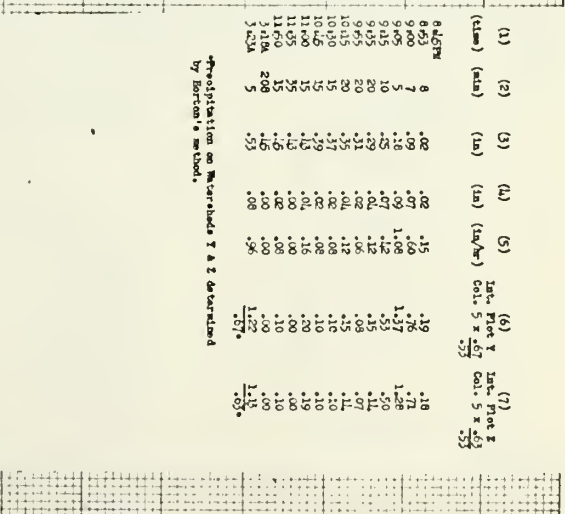
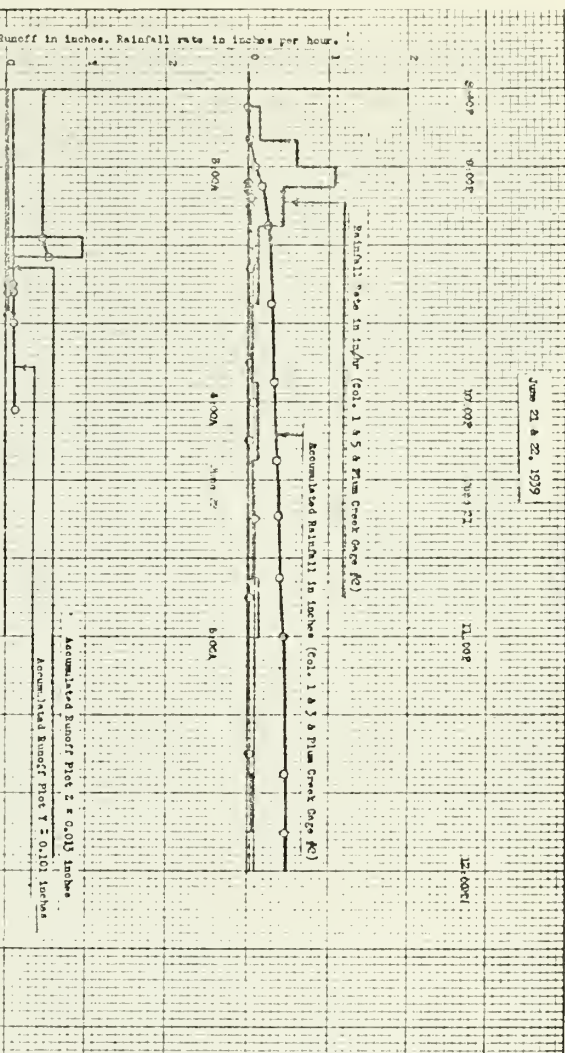
DIVISION OF RESEARCH W. C. LOWDERMILK, CHIEF

STORM H:J

For by letter date 10/10/00 "e sou Co. 24/50
del

Computations by James date: 11/1/68, ref type: etc., dtd: 11/1/68

June 21 & 22, 1939



UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
H. H. BENNETT, CHIEF,
DIVISION OF RESEARCH, W. C. LOWDERMILK, CHIEF

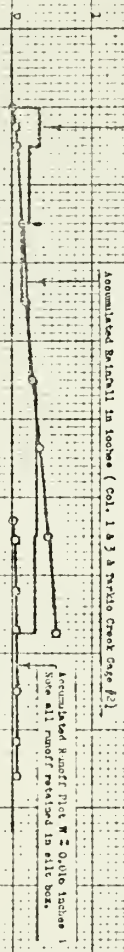
STORM NO. _____

Part by 11.5 due to 1.5 attributed by 1.5
computation by 1.5 due to 1.5 created by 1.5 due to 1.5

Watershed Plot W
June 25, 1939

5:30 A.M. 7:00 A.M. 8:00 A.M.

Rainfall and Runoff in inches
Rainfall rate in inches per hour

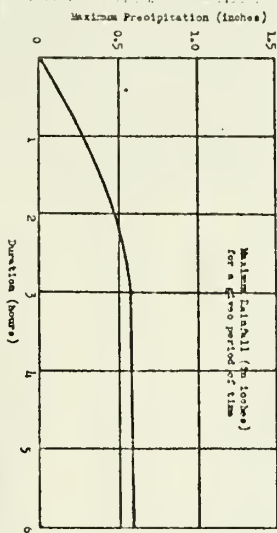


Rainfall rate in inches/hr (Col. 1 & 2 of Table Creek Gauge #2)

Accumulated Rainfall in inches (Col. 1 & 2 of Table Creek Gauge #2)

Accumulated Runoff Plot W = 0.016 inches
from all runoff received in this basin.

Maximum Precipitation (inches)

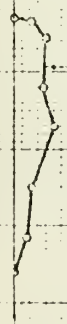


Maximum Rainfall (in inches)
for a given period of time

Duration (hours)

Watershed Plot W

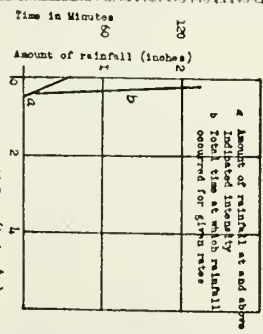
Q = Discharge in cu. ft. per sec.



(1) (2) (3) (4) (5) (6)
(inches) (in) (in) (in) (in/hr) (in/hr)
Col. 5 & 6 of Table

5:00 A.M.	5	.03	.08	.36	.35
5:05	5	.06	.08	.35	.35
5:10	20	.13	.07	.24	.20
5:15	30	.21	.07	.22	.20
5:20	30	.27	.07	.22	.20
5:25	30	.34	.10	.19	.29
5:30	20	.34	.10	.30	.29
5:35	20	.36	.12	.29	.29
5:40	20	.36	.12	.29	.29

*Precipitation on Watershed Plot W determined by
Bartlett's method.



a Amount of rainfall at and above
watershed area
b Total time at which rainfall
occurred for 6 in. rise

Rainfall Rate (inches/hr)

Plot W

Area (acres)..... 1.97
Preceding Rain (in.)..... .10
Date basin..... June 22
Duration (hours)..... 0 hrs. 4 min.
Temperature (air, 4 min.)..... 79 and 85
Soil (major type)..... Barren silt loam
Percent of area.....
Slope, average (percent)..... 7.76
Rainfall.....
Cover, type..... Corn
Depth (ft.)..... 28 inches
Date last cut..... June 12 outwashed
Soil loss (tons per acre)..... 0.010
Rotation (corn, corn, oats).....
Results.....

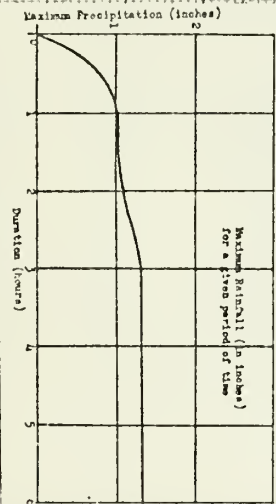
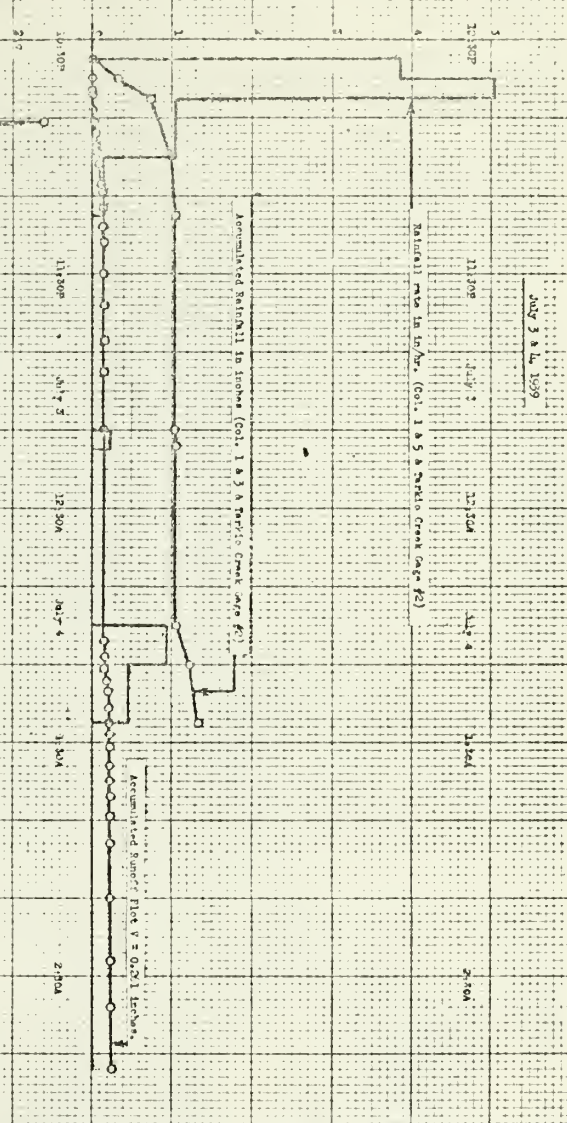
UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
H. H. BENNETT, CHIEF
DIVISION OF PRESENTATION W. C. CONOVER, CHIEF

STORM NO.

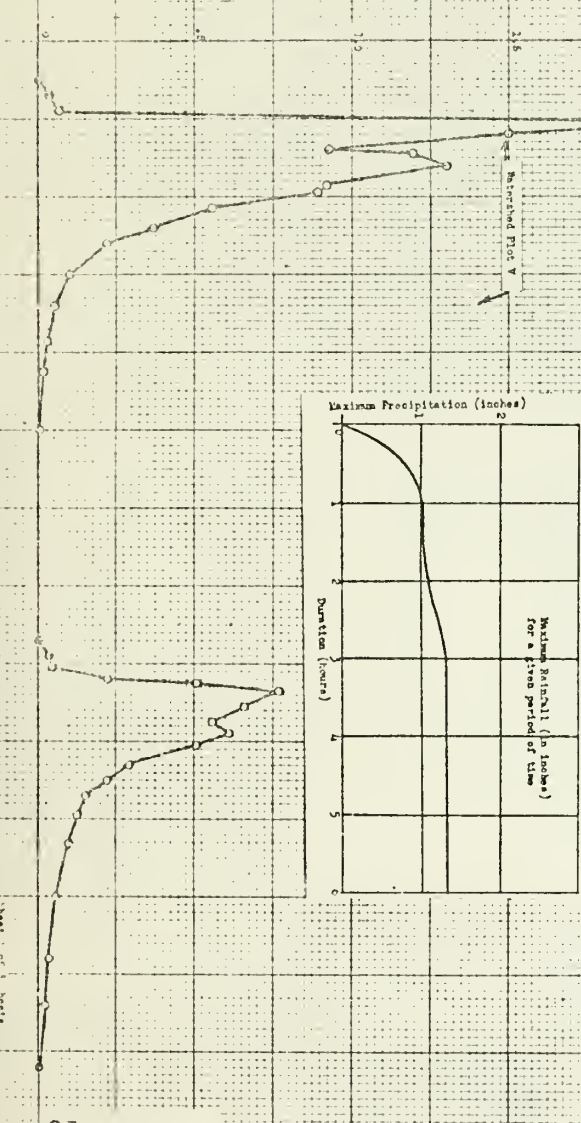
June 25, 1939
Cartoon, 1 mm
Sheet 1 of 1 Sheet

Plot by
Watershed by
Watershed by
Watershed by

Runoff in inches. Rainfall rate in inches per hour.

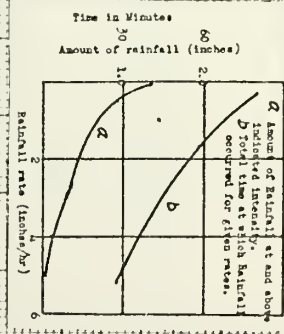


Liaborgs in cu. ft. per sec.



Precipitation on Marched Plot V determined by Horton's method.

(1)	(2)	(3)	(4)	(5)	(6)
Time (min)	Rate (in/hr)	Rate (in/hr)	Rate (in/hr)	Rate (in/hr)	Date on Plot V
10:55 PM					1-29
11:00	0.22	0.22	0.04	0.70	
11:05	0.16	0.16	0.04	0.56	
11:10	0.16	0.16	0.04	0.56	
11:15	0.16	0.16	0.04	0.56	
11:20	0.16	0.16	0.04	0.56	
11:25	0.16	0.16	0.04	0.56	
11:30	0.16	0.16	0.04	0.56	
11:35	0.16	0.16	0.04	0.56	
11:40	0.16	0.16	0.04	0.56	
11:45	0.16	0.16	0.04	0.56	
11:50	0.16	0.16	0.04	0.56	
11:55	0.16	0.16	0.04	0.56	
12:00	0.16	0.16	0.04	0.56	
12:05	0.16	0.16	0.04	0.56	
12:10	0.16	0.16	0.04	0.56	
12:15	0.16	0.16	0.04	0.56	
12:20	0.16	0.16	0.04	0.56	
12:25	0.16	0.16	0.04	0.56	
12:30	0.16	0.16	0.04	0.56	
12:35	0.16	0.16	0.04	0.56	
12:40	0.16	0.16	0.04	0.56	
12:45	0.16	0.16	0.04	0.56	
12:50	0.16	0.16	0.04	0.56	
12:55	0.16	0.16	0.04	0.56	

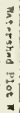
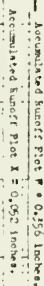


Area (a/cro) 5.25
 Precipitation (in.) 0.27
 Date begun July 1
 Duration (hours) 2 hrs 5 min.
 Temperature (air, A min.) 88 & 64
 Soil (water type) Limerick silt loam
 Percent of area 7.69
 Slope, average (percent) 7.69
 Slope, type 51 loam
 Soil test cultivated 50 loam cultivated
 Soil test (time per acre) 0.501
 Slope (type) 51 loam
 Slope (type) 51 loam
 Slope (type) 51 loam

UNITED STATES DEPARTMENT OF AGRICULTURE
 SOIL CONSERVATION SERVICE
 N. H. BENNETT CHIEF
 DIVISION OF RESEARCH, W. C. LONGWORTH CHIEF

STORM NO. _____
 Plot by L. H. S. 12-19-49 based by L. H. S.
 Computation by L. H. S. 12-19-49 based by L. H. S.

1955 7 8 1955



10.95	5	3.2	7.2	3.84	3.55	3.44
10.40	5	1.0	.62	1.64	.46	.40
10.65	15	1.00	.62	1.64	.76	.70
11.65	15	1.00	.62	1.64	.96	.90
12.15	55	1.04	.64	.60	.82	.72
12.15	55	1.04	.64	.60	.82	.72
1.00	16	1.06	.62	.60	.80	.80
1.10	16	1.06	.60	.60	.80	.80
1.55	15	1.54	.66	.66	.86	.86
			.62	.66	.86	.86
					1.26	1.26

com, 000000

CHIEF

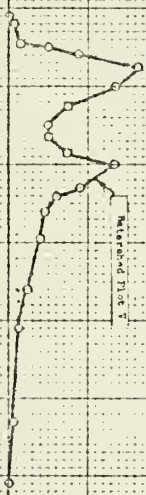
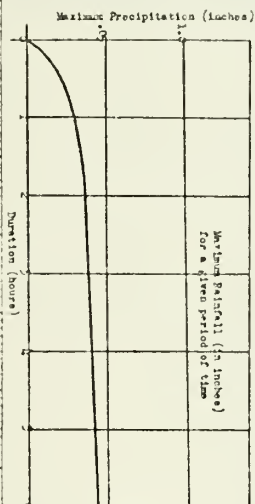
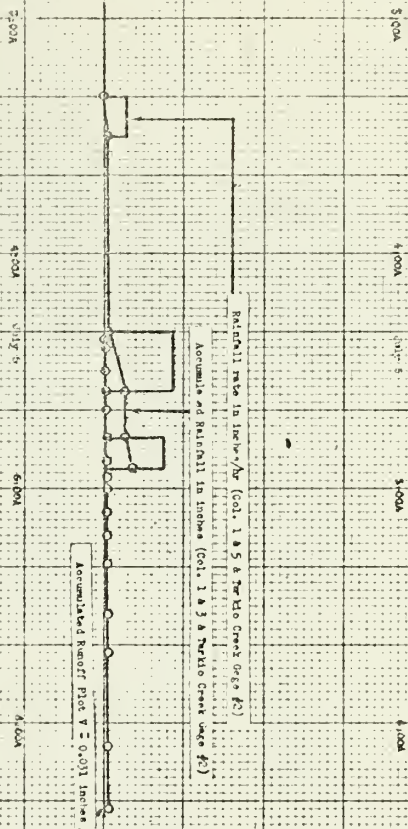
DATE: 11/1/2011

July 3 & 4, 1939
O'Fallon, Iowa
-00-201-1 notes

Marshall Plot V

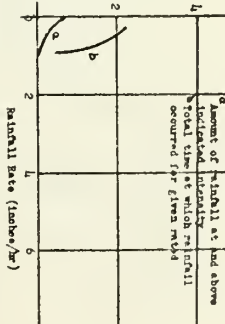
July 5, 1939

Rainfall and Runoff in inches. Rainfall rate in inches per hour.



July 5, 1939
Marshall, Iowa
Sheet 1 of 3 Sheets

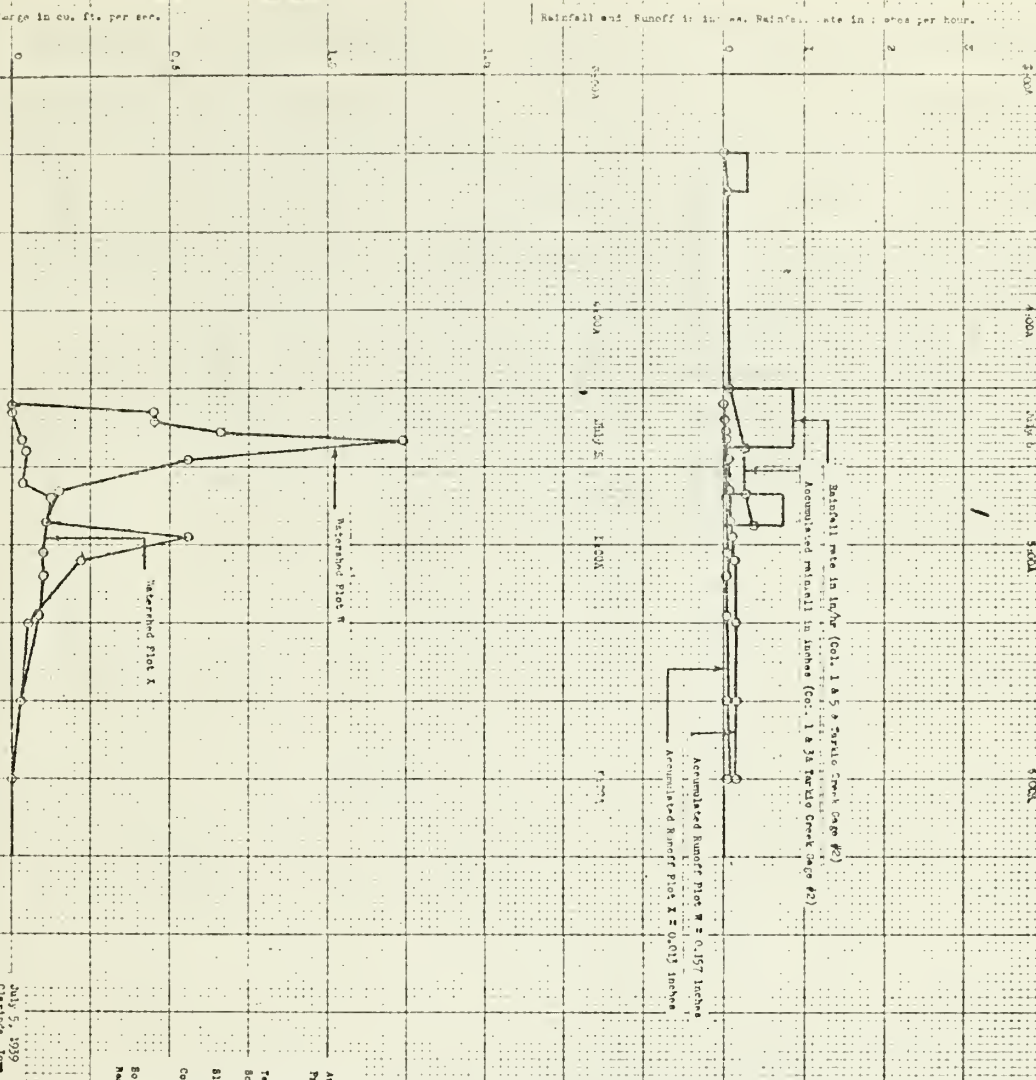
Time in Minutes
Amount of Rainfall (inches)



(1)	(2)	(3)	(4)	(5)	(6)
Time (min)	Rate (in)	Rate (in)	Rate (in)	Rate (in/hr)	Rate (in/hr)
3:00	10	.05	.05	.05	.05
3:05	10	.05	.05	.05	.05
3:10	10	.05	.05	.05	.05
3:15	10	.05	.05	.05	.05
3:20	10	.05	.05	.05	.05
3:25	10	.05	.05	.05	.05
3:30	10	.05	.05	.05	.05
3:35	10	.05	.05	.05	.05
3:40	10	.05	.05	.05	.05
3:45	10	.05	.05	.05	.05
3:50	10	.05	.05	.05	.05
3:55	10	.05	.05	.05	.05
4:00	10	.05	.05	.05	.05
4:05	10	.05	.05	.05	.05
4:10	10	.05	.05	.05	.05
4:15	10	.05	.05	.05	.05
4:20	10	.05	.05	.05	.05
4:25	10	.05	.05	.05	.05
4:30	10	.05	.05	.05	.05
4:35	10	.05	.05	.05	.05
4:40	10	.05	.05	.05	.05
4:45	10	.05	.05	.05	.05
4:50	10	.05	.05	.05	.05
4:55	10	.05	.05	.05	.05
5:00	10	.05	.05	.05	.05
5:05	10	.05	.05	.05	.05
5:10	10	.05	.05	.05	.05
5:15	10	.05	.05	.05	.05
5:20	10	.05	.05	.05	.05
5:25	10	.05	.05	.05	.05
5:30	10	.05	.05	.05	.05
5:35	10	.05	.05	.05	.05
5:40	10	.05	.05	.05	.05
5:45	10	.05	.05	.05	.05
5:50	10	.05	.05	.05	.05
5:55	10	.05	.05	.05	.05
6:00	10	.05	.05	.05	.05
6:05	10	.05	.05	.05	.05
6:10	10	.05	.05	.05	.05
6:15	10	.05	.05	.05	.05
6:20	10	.05	.05	.05	.05
6:25	10	.05	.05	.05	.05
6:30	10	.05	.05	.05	.05
6:35	10	.05	.05	.05	.05
6:40	10	.05	.05	.05	.05
6:45	10	.05	.05	.05	.05
6:50	10	.05	.05	.05	.05
6:55	10	.05	.05	.05	.05
7:00	10	.05	.05	.05	.05
7:05	10	.05	.05	.05	.05
7:10	10	.05	.05	.05	.05
7:15	10	.05	.05	.05	.05
7:20	10	.05	.05	.05	.05
7:25	10	.05	.05	.05	.05
7:30	10	.05	.05	.05	.05
7:35	10	.05	.05	.05	.05
7:40	10	.05	.05	.05	.05
7:45	10	.05	.05	.05	.05
7:50	10	.05	.05	.05	.05
7:55	10	.05	.05	.05	.05
8:00	10	.05	.05	.05	.05
8:05	10	.05	.05	.05	.05
8:10	10	.05	.05	.05	.05
8:15	10	.05	.05	.05	.05
8:20	10	.05	.05	.05	.05
8:25	10	.05	.05	.05	.05
8:30	10	.05	.05	.05	.05
8:35	10	.05	.05	.05	.05
8:40	10	.05	.05	.05	.05
8:45	10	.05	.05	.05	.05
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9:00	10	.05	.05	.05	.05
9:05	10	.05	.05	.05	.05
9:10	10	.05	.05	.05	.05
9:15	10	.05	.05	.05	.05
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9:30	10	.05	.05	.05	.05
9:35	10	.05	.05	.05	.05
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9:50	10	.05	.05	.05	.05
9:55	10	.05	.05	.05	.05
10:00	10	.05	.05	.05	.05
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10:10	10	.05	.05	.05	.05
10:15	10	.05	.05	.05	.05
10:20	10	.05	.05	.05	.05
10:25	10	.05	.05	.05	.05
10:30	10	.05	.05	.05	.05
10:35	10	.05	.05	.05	.05
10:40	10	.05	.05	.05	.05
10:45	10	.05	.05	.05	.05
10:50	10	.05	.05	.05	.05
10:55	10	.05	.05	.05	.05
11:00	10	.05	.05	.05	.05
11:05	10	.05	.05	.05	.05
11:10	10	.05	.05	.05	.05
11:15	10	.05	.05	.05	.05
11:20	10	.05	.05	.05	.05
11:25	10	.05	.05	.05	.05
11:30	10	.05	.05	.05	.05
11:35	10	.05	.05	.05	.05
11:40	10	.05	.05	.05	.05
11:45	10	.05	.05	.05	.05
11:50	10	.05	.05	.05	.05
11:55	10	.05	.05	.05	.05
12:00	10	.05	.05	.05	.05
12:05	10	.05	.05	.05	.05
12:10	10	.05	.05	.05	.05
12:15	10	.05	.05	.05	.05
12:20	10	.05	.05	.05	.05
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12:30	10	.05	.05	.05	.05
12:35	10	.05	.05	.05	.05
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14:00	10	.05	.05	.05	.05
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14:10	10	.05	.05	.05	.05
14:15	10	.05	.05	.05	.05
14:20	10	.05	.05	.05	.05
14:25	10	.05	.05	.05	.05
14:30	10	.05	.05	.05	.05
14:35	10	.05	.05	.05	.05
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15:20	10	.05	.05	.05	.05
15:25	10	.05	.05	.05	.05
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17:00	10	.05	.05	.05	.05
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17:20	10	.05	.05	.05	.05
17:25	10	.05	.05	.05	.05
17:30	10	.05	.05	.05	.05
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17:40	10	.05	.05	.05	.05
17:45	10	.05	.05	.05	.05
17:50	10	.05	.05	.05	.05
17:55	10	.05	.05	.05	.05
18:00	10	.05	.05	.05	.05
18:05	10	.05	.05	.05	.05
18:10	10	.05	.05	.05	.05
18:15	10	.05	.05	.05	.05
18:20	10	.05	.05	.05	.05
18:25	10	.05	.05	.05	.05
18:30	10	.05	.05	.05	.05
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18:40	10	.05	.05	.05	.05
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19:20	10	.05	.05	.05	.05
19:25	10	.05	.05	.05	.05
19:30	10	.05	.05	.05	.05
19:35	10	.05	.05	.05	.05
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19:45	10	.05	.05	.05	.05
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19:55	10	.05	.05	.05	.05
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20:15	10	.05	.05	.05	.05
20:20	10	.05	.05	.05	.05
20:25	10	.05	.05	.05	.05
20:30	10	.05	.05	.05	.05
20:35	10	.05	.05	.05	.05
20:40	10	.05	.05	.05	.05
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20:50	10	.05	.05	.05	.05
20:55	10	.05	.05	.05	.05
21:00	10	.05	.05	.05	.05
21:05	10	.05	.05	.05	.05
21:10	10	.05	.05	.05	.05
21:15	10	.05	.05	.05	.05
21:20	10	.05	.05	.05	.05
21:25	10	.05	.05	.05	.05
21:30	10	.05	.05	.05	.05
21:35	10	.05	.05	.05	.05
21:40	10	.05	.05	.05	.05
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21:55	10	.05	.05	.05	.05
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22:35	10	.05	.05	.05	.05
22:40	10	.05	.05	.05	.05
22:45	10	.05	.05	.05	.05
22:50	10	.05	.05	.05	.05
22:55	10	.05	.05	.05	.05
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23:30	10	.05	.05	.05	.05
23:35	10	.05	.05	.05	.05
23:40	10	.05	.05	.05	.05
23:45	10	.05	.05	.05	.05
23:50	10	.05	.05	.05	.05
23:55	10	.05	.05	.05	.05
24:00	10	.05</			

Watershed Plot W & X

July 5, 1939



(1)	(2)	(3)	(4)	(5)	(6)	(7)
(Time) (min)	(in)	(in)	(in/hr)		Dist. on Plot W	Dist. on Plot X
3:50 AM	10	.05	.05	.20	.31	.35
4:30	50	.05	.00	.00	.00	.00
4:35	15	.27	.22	.08	.90	.93
4:47	12	.27	.00	.00	.77	.79
4:54	8	.27	.10	.15	.78	.79

*Precipitation on Watershed W & X determined by Horton's method.

Area (acres) _____
 Preceding Rain (in.) _____
 Date before _____
 Duration (hours) _____
 Temperature (max. & min.) _____
 Soil (major type) _____
 Percent of area _____
 Slope, average (percent) _____
 Elevation _____
 Cover, type _____
 Height (ft.) _____
 Date last cultivated _____
 Soil loss (tons per acre) _____
 Remarks _____

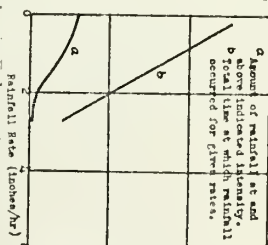
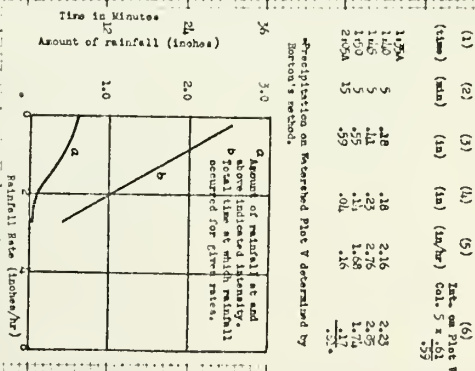
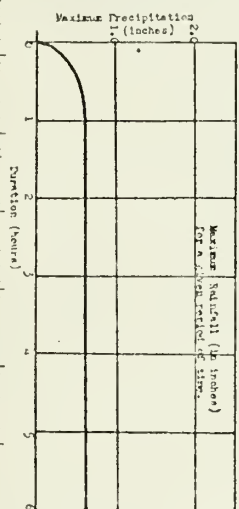
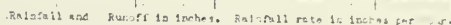
July 5, 1939
 Clearing, from
 hour 2 of 3 hours

UNITED STATES DEPARTMENT OF AGRICULTURE
 SOIL CONSERVATION SERVICE
 H. H. BENNETT, CHIEF
 DIVISION OF RESEARCH, W. C. LOWDERMILK, CHIEF

STORM NO. _____

Plot by _____ date _____ checked by _____
 Computed by _____ date _____ and by _____

July 28, 1939



Area (acres) 8.25

Preceding Rain (in.)	.....	.15
East Bern	.....	Apr. 25
duration (hours)	.....	1 hr 10 min.
Intensity (4 to 6 in.)	.....	87 x 66
Soil (water type)	.....	"crack" pit zone
Percent of area	.....
Slope, average (percent)	.....	7.60
surface	.....
Cover, type	.....	open
height (ft.)	.....	30 inches
Area last cultivated	.....	Also so cultivated
Bolt loss (lost per acre)	.....	0.024
Remarks	.....	condition (very) good only, clump

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
H. H. BENNETT, CHIEF,
DIVISION OF RESEARCH, W. C. LOWDERMILK, CHIEF

July 26, 1939
Carrizosa, Iowa
Have 1 of 2 minutes

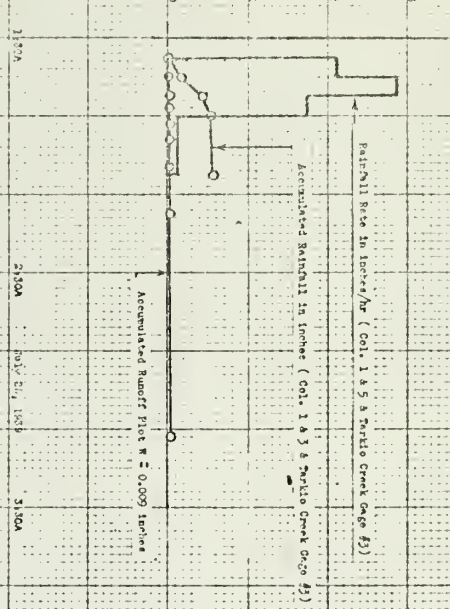
Post by <u>date</u>	checked by <u>date</u>
Computations by <u>date</u>	checked by <u>date</u>

July 28, 1932

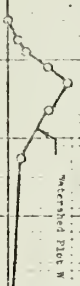
(1) (2) (3) (4) (5) (6)
 (Time) (min) (in) (in) (in/hr) Col. 5 x 100
 1:50AM 5 .10 .13 2.16 2.19
 1:40 5 .41 .43 2.76 2.80
 1:30 5 .25 .26 1.66 1.71
 2:00 15 .59 .61 1.16 1.20

*Precipitation on Rerashed Plot W
 determined by Horton's method.

Rainfall and Runoff in Inches. Rat-Call Rate in inches per hour



Accumulated Rainfall in inches (Col. 1 & 5) ≈ 0.09 inches
 Accumulated Runoff Plot W ≈ 0.09 inches



STORM NO. _____

Plot W, 2.5 x 100 ft. (approx. 100 ft. x 100 ft.)
 Computed by _____ data _____

UNITED STATES DEPARTMENT OF AGRICULTURE
 SOIL CONSERVATION SERVICE
 H. W. BENNETT, CHIEF
 DIVISION OF RESEARCH, W. C. LOWDERMILK, CHIEF

Area (acres) _____ 1.97 Plot W
 Freezing Rain (in.) _____ .05
 Date Term _____ July 28
 Duration (hours) _____ 1 hr 10 min.
 Temperature (max. & min.) _____ 67 & 66
 Soil (major type) _____ Fertilized silt loam
 Percent of area _____
 Slope, average (percent) _____ 7.76
 Station _____
 Cover, type _____ Corn
 Height (ft.) _____ 26 inches
 Date last cultivated _____ Cultivated June 20
 Soil type (low per acre) _____ 0.032
 Remarks _____
 Station (cont. corn, only, please)

